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SAPIENZA RICERCA

CHI RICERCA TROVA.

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Repertorio delle ricerche pervenute
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Critical levels of tropospheric ozone, concentrations or flux-based, and their effects on crops and natural vegetation in Mediterranean environment: feasibility of the different approaches

Livelli critici di ozono troposferico, basati sulle concentrazioni o sui flussi, ed effetti sulla vegetazione naturale e coltivata in ambiente mediterraneo: praticabilità dei diversi approcci.

Tropospheric ozone (O3) concentrations are high in Mediterranean countries like Italy, but these high concentration often occurs under environmental condition that may limit O3 uptake (stomatal flux) by the vegetation. Thus, the application of the concentration-based approach for risk assessment (exceedance of the critical level in terms of AOT40, Directive 2008/50/EC) may lead to an overestimation of risks, suggesting non realistic potential losses in forest and crop productivity. This research has highlighted the contribution of different Holm oak canopy portions to overall O3 uptake impact, attributing important roles to microclimatic conditions and to physiological activity related to stomata opening, which in turn is affected by internal and external effectors. By using measurements carried out both at leaf and canopy level on Holm oak individuals located in the coastal area of Lazio, a modeling approach has been developed, that allowed reliable simulations of the stomatal and canopy uptake dynamics. Moreover, by using sap-flow technology, it has been possible to determine night time ozone stomatal uptake by evergreen species. This nocturnal uptake could be particularly relevant for vegetation risk assessment.

Altri partecipanti alla ricerca

Lina Fusaro	Under 40	SSD : BIO/07 - Ecologia
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Partner della ricerca

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Istituto Ambiente Italia, Milano
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Stockholm Environmental Institute at York, University of York, UK.
Joint Research Centre, Ispra (VA)
Università Cattolica di Brescia, Dip. di Matematica e Fisica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ENVIRONMENTAL POLLUTION
Titolo : Measuring, modelling and testing ozone
exposure, flux and effects on vegetation in southern European
conditions - What does not work? A review from Italy.
Autore/i : FERRETTI M, FAGNANO M, AMORIELLO T, BADIANI M, BALLARIN-DENTI A, BUFFONI A, BUSSOTTI F, CASTAGNA A, CIESLIK S, COSTANTINI A, DE MARCO A, GEROSA G, LORENZINI

Nome rivista o titolo libro o atti conferenza : ENVIRONMENTAL POLLUTION
G, MANES F., MEROLA G, NALI C, PAOLETTI E, PETRICCIONE B, RACALBUTO S, RANA G, RANIERI A, et al.
Anno : 2007
Numero volume : 146
Pagine da - a : 648 - 658
Issn : 0269-7491
Doi : 10.1016/j.envpol.2006.05.012
Nome rivista o titolo libro o atti conferenza : BIOGEOSCIENCES
Titolo : Improved sapflow methodology reveals considerable night-time ozone uptake by Mediterranean species.
Autore/i : MEREU S, GEROSA G, FINCO A, FUSARO L, MUYS B, MANES F.
Anno : 2009
Numero volume : 6
Pagine da - a : 2599-2610
Issn : 1726-4170
Doi : 10.5194/bg-6-2599-2009
Nome rivista o titolo libro o atti conferenza : ENVIRONMENTAL AND EXPERIMENTAL BOTANY
Titolo : Estimates of potential ozone stomatal uptake in mature trees of Quercus ilex in a Mediterranean climate.
Autore/i : MANES F., VITALE M, FABI AM, DE SANTIS F, ZONA D
Anno : 2007
Numero volume : 59
Pagine da - a : 235-241
Issn : 0098-8472
Doi : 10.1016/j.envexpbot.2005.12.001

MACROAREA : A

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Genetic history of human populations from sub-Saharan Africa

Storia genetica delle popolazioni umane dell'Africa subsahariana

We integrate the information provided by different families of polymorphic loci (mitochondrial DNA, Y chromosome, autosomes) with historical and cultural knowledge regarding the human populations of sub-Saharan Africa, in order to reconstruct their genetic history, peopling processes and shed light on adaptive processes. We have focused our attention on the genetic patterns associated with the early African peopling and with the Bantu expansion. Attention has been given to the adaptve significance of the genetically inherited deficit of glucose 6 phosphate dehydrogenase. Doing so, we have tried to combine current lab methodologies with innivative approaches for data analysis (e.g. approximate Bayesian methods of inference). We plan to further develop our study using next generation technologies for DNA analysis.

The research work has been carried out with international collaborations, as it is witnessed by the numerous scientifi papers. Up to now we have published more than 50 papers in internation scientific journal with a total Impact factor of approximately 300. The PI has a H index of 21.

Altri partecipanti alla ricerca

Marco Capocasa	Under 40	SSD : BIO/08 - Antropologia
Paolo Anagnostou	Under 40	SSD : BIO/08 - Antropologia
Cinzia Battaggia		SSD : BIO/08 - Antropologia

Marco Capocasa	Under 40	SSD : BIO/08 - Antropologia
Cristian Capelli	Under 40	SSD : BIO/08 - Antropologia
Valentina Coia		SSD : BIO/08 - Antropologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : MOLECULAR BIOLOGY AND EVOLUTION
Titolo : Insights into the demographic history of African Pygmies from complete mitochondrial genomes.
Autore/i : BATINI C and LOPES J and BEHAR DM and CALAFELL F and JORDE LB and VAN DER VEEN L and QUINTANA-MURCI L and SPEDINI G and DESTRO-BISOL G. and COMAS D
Anno : 2011
Numero volume : 28,
Pagine da - a : 1099--1110
Issn : 0737-4038
Doi : 10.1093/molbev/msq294
Nome rivista o titolo libro o atti conferenza : MOLECULAR BIOLOGY AND EVOLUTION
Titolo : Variation of Female and Male Lineages in Sub-Saharan Populations: The Importance of Socio-Cultural Factors
Autore/i : DESTRO-BISOL G. and DONATI F and COIA V and BOSCHI I and VERGINELLI F and CAGLIA A and TOFANELLI S and SPEDINI G and CAPELLI C
Anno : 2004
Numero volume : 21,
Pagine da - a : 1673--1682
Issn : 0737-4038
Nome rivista o titolo libro o atti conferenza : SCIENCE
Titolo : Haplotype diversity and linkage disequilibrium at human G6PD: recent origin of alleles that confer malarial resistance
Autore/i : TISHKOFF SA and VARKONYI R and CAHINHINAN N and ABBES S and ARGYROPOULOS G and DESTRO-BISOL G. and DROUSIOTOU A and DANGERFIELD B and LEFRANC G and LOISELET J and PIRO A and STONEKING M and TAGARELLI A and TAGARELLI G and TOUMA EH and WILLIAMS SM and CLARK AG
Anno : 2001
Numero volume : 293,
Pagine da - a : 455--462
Issn : 0036-8075

MACROAREA : A

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Unravelling the molecular mechanisms controlling
stem cell division and differentiation in Arabidopsis
Caratterizzazione dei meccanismi molecolari che controllano la divisione e il differenziamento delle cellule staminali in Arabidopsis.

Plant post-embryonic development takes place in localized regions called meristems. In the root of Arabidopsis thaliana, stem cells in the apical region of the meristem self-renew and produce daughter cells that differentiate in the distal meristem transition zone. To ensure root growth, the rate of cell differentiation must equal the rate of generation of new cells. We have shown that maintenance of the Arabidopsis root meristem - and consequently root growth - is controlled

by the interaction between two hormones in the meristem: cytokinin, which promotes cell differentiation, and auxin, which promotes cell division, and has unveiled the regulatory circuit underlying this interaction. Scope of this proposal is to clarify how the cytokinin/auxin interaction influences the activities of the entire root meristem, thus ensuring a balance between cell differentiation and cell division. The work proposed will yield significant advances in our understanding of plant organ growth and development. In addition, such understanding is expected to foster novel tools to manipulate plant architecture for agricultural biotechnology, as roots critically influence nutrient and water uptake efficiency, and consequently the overall performances of (crop) plants.

MACROAREA : A

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Molecular mechanisms of human diseases caused by serpin polymerisation

Meccanismi molecolari delle malattie umane causate dalla polimerizzazione delle serpine

Serpins are an ample family of evolutionary conserved proteins that inhibit serin proteases, mainly in the extracellular space. The inhibitory mechanism involves extensive conformational change in the serpin molecule, which requires high flexibility. This renders serpins prone to destabilisation of the tertiary structure as a consequence of point mutations. Several aminoacidic changes have been reported in different serpins in connection with human disease. In most cases, the mutant proteins form homopolymers that cannot exit the endoplasmic reticulum as efficiently as the wild type proteins. This causes cell toxicity and eventually disease, with a phenotype that depends on the specific serpin affected and the rate of polymerisation of the mutant protein. The exact mechanism of polymerisation and the pathways of cell toxicity are still under active research. We use mammalian cell models and monoclonal antibodies to better understand the mechanisms underlying alpha-1 antitrypsin deficiency, which is due to mutations on the prototypic serpin alpha-1 antitrypsin, and the dementia FENIB (familial encephalopathy with neuroserpin inclusion bodies), which is caused by point mutations in neuroserpin.

Partner della ricerca

Dr. Stefan Marciniak (University of Cambridge, UK)
Dr. Anna Fra (University of Brescia, Italy)
Dr. Mauro Manno (Biophysics Institute, CNR, Palermo, Italy)
Prof. Martino Bolognesi (University of Milano, Italy)
Prof. David A. Lomas (University of Cambridge, UK)
Prof. Juan Perez Rodriguez (University of Malaga, Spain)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PNAS
Titolo : Defining the mechanism of polymerization in the serpinopathies
Autore/i : Ekeowa UI*, Freeke J*, Miranda E*, Gooptu B, Bush MF, Pérez J, Teckman J, Robinson CV and Lomas DA
Anno : 2010
Numero volume : 107
Pagine da - a : 17146-17151
Nome rivista o titolo libro o atti conferenza : Hepatology
Titolo : A novel monoclonal antibody to characterize pathogenic polymers in liver disease associated with alpha1 antitrypsin deficiency
Autore/i : Miranda E, Perez J, Ekeowa U, Hadzic N, Kalsheker N, Gooptu B, Portmann B, Belorgey D, Hill M, Chambers

Nome rivista o titolo libro o atti conferenza : PNAS
S, Teckman J, Alexander G, Marciniak S, Lomas D
Anno : 2010
Numero volume : 52
Pagine da - a : 1078-1088
Nome rivista o titolo libro o atti conferenza : Journal of Clinical Investigations
Titolo : Modelling inherited metabolic disorders of the liver with human induced pluripotent stem cells
Autore/i : Rashid ST, Corbineau S, Hannan N, Marciniak SJ, Miranda E, Alexander G, Huang-Doran I, Ahrlund-Richter L, Skepper J, Griffin J, Semple R, Weber A, Lomas DA, Vallier L
Anno : 2010
Numero volume : 120
Pagine da - a : 3127-3136

MACROAREA : A

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Role of microRNAs in myelopoiesis and acute myeloid leukemia

Ruolo dei microRNA nella mielopoiesi e leucemia mieloide acuta

Acute myeloid leukemia (AML) is a heterogeneous hematopoietic malignancy, characterized by complete or partial blockage at different stages of the differentiation of myeloid progenitor cells, which has been mainly attributed to chromosomal abnormalities. Our research interests are focused in defining the roles of microRNAs (miRNAs) in normal and abnormal differentiation of myeloid cells (granulocytes and monocytes). MiRNAs constitute a family of small non-coding RNAs that play important roles in post-transcriptional gene regulation. Given the extensive regulation of normal hematopoietic development by miRNA, it is not surprising that miRNAs are extensively involved in the pathogenesis of AML. A relevant number of human miRNAs have been shown to act as oncogenes or as tumor suppressor genes. The goals of our lab are to investigate the biology of these miRNAs, analyse their expression and understand their functions in normal and pathological conditions. In particular, we want to study how miRNAs can influence myelopoiesis and to identify their target mRNAs in order to understand the molecular networks involved in the alternative control between cell growth and differentiation.

Altri partecipanti alla ricerca

Irene Bozzoni SSD : BIO/11 - Biologia molecolare

Brevetti

BOZZONI I, FATICA A., ROSA A (2007). microRNA e siRNA e loro uso in terapia. RM2007A000595

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : LEUKEMIA
Titolo : A new molecular network comprising PU.1, interferon regulatory factor proteins and miR-342 stimulates ATRA-mediated granulocytic differentiation of Acute Promyelocitic Leukemia cells.
Autore/i : DE MARCHIS ML and BALLARINO M and B. SALVATORI and PUZZOLO MC and BOZZONI I and FATICA A.
Anno : 2009
Numero volume : 23,
Pagine da - a : 856--862

Nome rivista o titolo libro o atti conferenza : LEUKEMIA
Issn : 0887-6924
Doi : 10.1038/leu.2008.372
Nome rivista o titolo libro o atti conferenza : BIOCHEMICAL SOCIETY TRANSACTIONS
Titolo : Role of microRNAs in myeloid differentiation
Autore/i : FATICA A. and ROSA A and BALLARINO M and MARCHIS ML and RASMUSSEN KD and BOZZONI I
Anno : 2008
Numero volume : 36,
Pagine da - a : 1201--1205
Issn : 0300-5127
Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA
Titolo : The interplay between the master transcription factor PU.1 and miR-424 regulates human monocyte/macrophage differentiation.
Autore/i : ROSA A and BALLARINO M and SORRENTINO A and STHANDIER O and DE ANGELIS FG and MARCHIONI M and MASELLA B and GUARINI A and FATICA A. and PESCHLE C and BOZZONI I
Anno : 2007
Numero volume : 104,
Pagine da - a : 19849--19854
Issn : 0027-8424

MACROAREA : A
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A molecular, cellular and functional study on nervous system developmental alteration in the mdx mouse,an animal model of the Duchenne Muscular Dystrophy
Studio molecolare, cellulare e funzionale delle alterazioni indotte sullo sviluppo del sistema nervoso nei topi mdx, un modello animale della distrofia muscolare di Duchenne

MACROAREA : A
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The cell wall in plant immunity and development
La parete cellulare nell'immunità e nello sviluppo delle piante
The cell wall (CW) is a source of signal molecules for the adaptation of plants to stress and environmental changes. We study how modification of pectin, a main CW polysaccharide, by microbial and plant-derived enzymes affects defence and development. Using biochemical, molecular and genetic tools, we defined the structure-function and evolution of polygalacturonases (PGs) and their inhibitors PGIPs, and of pectin methylesterases and their inhibitors PMEIs. Transgenic expression of PGIPs, PGs or PMEIs improves plant resistance to diseases. Plant expressing PGs and PMEIs show improved saccharification of CW and this may have important applications in the bioconversion of plant biomass to biofuel and industrial products (Patent RM-2008-A696). Interaction between microbial PGs and PGIPs favours the accumulation of oligogalacturonides (OGs) that activate the plant immune response. OGs are perceived by a wall-associated kinase (WAK), recently identified through a novel strategy of chimeric receptor engineering (Patent RM-2009-

A279) that can be widely used for the improvement of plant resistance to pathogens and the characterization of the many plant orphan receptors. The transduction cascade activated by OGs is emerging as a key regulatory mechanism in plant defence and development.

Altri partecipanti alla ricerca

Daniela Bellincampi		SSD : BIO/04 - Fisiologia vegetale
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Benedetta Mattei		SSD : BIO/04 - Fisiologia vegetale
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Francesca Sicilia	Under 40	SSD : BIO/04 - Fisiologia vegetale
Vincenzo Lionetti	Under 40	SSD : BIO/04 - Fisiologia vegetale
Francesco Spinelli	Under 40	SSD : BIO/04 - Fisiologia vegetale

Brevetti

CERVONE F., DE LORENZO G, BRUTUS A, SICILIA F (2009). COSTRUTTI ESPRIMENTI RECETTORI CHIMERICI, E LORO USO PER L'ATTIVAZIONE CONTROLLATA DELLE RISPOSTE DI DIFESA A ORGANISMI PATOGENI IN PIANTE. RM2009A000279

ANNA LANTE, FEDERICO ZOCCA, GIOVANNA LOMOLINO, ALESSANDRO RAIOLA, BELLINCAMPI D., et al. (2008). Use of protein inhibitor of pectin methylesterase for reducing methanol formation in grape must must and marc, and process therefore. PCT/EP2008/052347

CERVONE F., DE LORENZO G, BELLINCAMPI D, FERRARI S, et al. F (2008). Uso di piante con un ridotti livelli di omogalatturonano de-esterificato nella parete cellulare o parti di esse per migliorare la saccarificazione di biomasse vegetali RM2008A0006

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA

Titolo : A domain swap approach reveals a role of the plant wall-associated kinase 1 (WAK1) as a receptor of oligogalacturonides.

Autore/i : BRUTUS A and SICILIA F and MACONE A and CERVONE F and DE LORENZO G.

Anno : 2010

Numero volume : 107,

Pagine da - a : 9452--9457

Issn : 0027-8424

Doi : 10.1073/pnas.1000675107

Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA

Titolo : Engineering the cell wall by reducing de-methyl-esterified homogalacturonan improves saccharification of plant tissues for bioconversion

Autore/i : LIONETTI V and FRANCOCCI F and FERRARI S and VOLPI C and BELLINCAMPI D and GALLETTI R and DOVIDIO R and DE LORENZO G. and CERVONE F

Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA
Anno : 2010
Numero volume : 107,
Pagine da - a : 616--621
Issn : 0027-8424
Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA
Titolo : Integration of evolutionary and desolvation energy analysis identifies functional sites in a plant immunity protein
Autore/i : CASASOLI M and FEDERICI L and SPINELLI F and DI MATTEO A and VELLA N and SCALONI F and FERNANDEZ-RECIO J and CERVONE F and DE LORENZO G.
Anno : 2009
Numero volume : 106,
Pagine da - a : 7666--7671
Issn : 0027-8424

MACROAREA : A

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Influence of autism associated mutations on
Neuroligins protein processing

Influenza di mutazoni associate ai disordini dello spettro autistico in proteine della famiglia delle Neuroligins

Autism Spectrum Disorder (ASD) is among the most devastating disorders of early childhood. Although the genetics of ASD is complex, evidences suggest an involvement of synaptic adhesion molecules in the pathogenesis of ASD. The neuroligins (NLGNs) are postsynaptic cell adhesion molecules interacting with the neurexins. The R451C substitution in the extracellular domain of NLGN3 was identified in two autistic brothers. It was shown that the NLGN3 mutant protein results mostly retained in the endoplasmic reticulum (ER) (De Jaco, 2006). By a biochemical and an innovative imaging approach, the proponent demonstrated that the R451C mutation alters locally the folding of the extracellular domain of NLGN3, reduces its rate of maturation and transport through the dendrites to reach the synapses in hippocampal neurons (De Jaco, 2010). On going work is focused on studying whether the accumulation of R451C NLGN3 in the ER can lead to ER stress and to the activation of the unfolded protein response (UPR), a signaling pathway that relays signals from the ER to activate target genes in the nucleus. Understanding the mechanisms by which mutant NLGNs are retained in the ER and whether or not this is linked to ER-stress will provide insights into synaptic cellular abnormalities linked to autism.

Partner della ricerca

Stefan Marciniak (University of Cambridge)
Dott. Palmer Taylor (University of Californi, San Diego)
Davide Comoletti (University of San Diego, California)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Chem Biol Interact.
Titolo : Trafficking of cholinesterases and neuroligins mutant proteins: An association with autism.
Autore/i : De Jaco A., Comoletti D., King CC., Taylor P.

Nome rivista o titolo libro o atti conferenza : Chem Biol Interact.
Anno : 2008
Numero volume : 175(1-3)
Pagine da - a : 349-51
Nome rivista o titolo libro o atti conferenza : Chem Biol Interact.
Titolo : Folding anomalies of neuroligin3 caused by a mutation in the alpha/beta-hydrolase fold domain.
Autore/i : De Jaco A, Dubi N, Comoletti D, Taylor P
Anno : 2010
Numero volume : 187(1-3)
Pagine da - a : 56-8
Nome rivista o titolo libro o atti conferenza : J Biol.Chem.
Titolo : Processing of thyroglobulin hypothyroidism-associated mutations in homologous proteins within the α/β-hydrolase fold family.
Autore/i : De Jaco, A.; Lin, M.Z.; Dubi, N.; Comoletti, D.; Miller, M.; Camp, S.; Ellisman, M.; Butko, M.T.; Tsien, R.Y.; Taylor, P.
Anno : 2010
Numero volume : ; 285(37)
Pagine da - a : 28674-82.

MACROAREA : A

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Influence of climate change on terrestrial microteriocoenoses in Italy

Influenza dei cambiamenti climatici su microteriocenosi terrestri in Italia

The effects of global climate change on animal and plants have been well documented over the last decades.In this framework the long-term monitoring of biological phenomena is very important in order to work out predictions and to adopt the suitable measures for biodiversity conservation and the natural resource management.Terrestrial small mammals (Rodents and Soricomorphs) have been chosen as suitable bio-indicators of climatic and environmental stress mainly because of their key role in terrestrial ecosystems. The two main objectives of this research were:
1)to detect the possible effects of global and local climate change on small mammal coenoses in Italy.Results show a rise of abundance of thermophylic species probably due to the greater xerothermic conditions of environments which could have facilitated the spread of these species.Some plausible consequences could be detected in the future if this trend will go on, such as reductions of biodiversity and greater risk for human health due to the diseases spread by rodents.
2)to perform a neural network model in order to estimate future population densities of some rodent species.The model so performed could be a useful tool to study forecast effects on key-stone species of woodland ecosystems.

Altri partecipanti alla ricerca

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MARIA RITA PALOMBO		SSD : GEO/01 - Paleontologia e paleoecologia
DONATELLA MAGRI		SSD : BIO/02 - Botanica sistematica

Partner della ricerca

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CONSIGLIO NAZIONALE DELLE RICERCHE
UNIVERSITA' DI PARMA
MUSEO CIVICO DI STORIA NATURALE DI FERRARA
PARCO NAZIONALE DELLA MAJELLA
PARCO NAZIONALE DEL GRAN SASSO E DEI MONTI DELLA LAGA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Kyoto e dintorni. I cambiamenti climatici come problema globale.
Titolo : Effetti dei cambiamenti climatici sugli animali
Autore/i : CRISTALDI M., SZPUNAR G.
Anno : 2006
Pagine da - a : 189-212
Isbn : 88-464-7432-5
Nome rivista o titolo libro o atti conferenza : Fresenius Environmental Bulletin
Titolo : Effects of global climate change on terrestrial small mammal communties in Italy
Autore/i : SZPUNAR G., ALOISE G., MAZZOTTI S., NIEDER L., CRISTALDI M.
Anno : 2008
Numero volume : 17 (9b)
Pagine da - a : 1526-1533
Issn : 1018-4619
Nome rivista o titolo libro o atti conferenza : Asia-Pacific Journal of Atmospheric Sciences
Titolo : Assessing climatic influences on Rodent Density: a neural network modelling approach and a case study in Italy.
Autore/i : PASINI A., SZPUNAR G., AMORI G., LANGONE R., CRISTALDI M.
Anno : 2009
Numero volume : 45
Pagine da - a : 319-330
Issn : 1976-7633

MACROAREA : A

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Generation of neurons and glial cells from neural stem cells under different inflammatory conditions

Generazione di neuroni e glia a partire da cellule staminali neurali in differenti condizioni infiammatorie

Neural stem cells (NSC), generating neurons and glia during the entire life span, are implicated in self-repair mechanisms in the adult brain. NSC partially replace damaged or dead neurons following acute or chronic brain injury. Injury-induced inflammation, mainly sustained by microglia, is viewed as one of the main obstacles to neurogenesis. Our group has contributed to establish the new concept that NSC fate and properties are differently modulated by distinct activated microglial phenotypes. Beneficial or noxious effects would depend on the nature, intensity and persistence of activating stimuli, and the specific pattern of soluble mediators produced. In particular we have demonstrated that acutely activated microglia acquire a pro-inflammatory phenotype that impairs neurogenesis, whereas chronically activated microglia adopt an anti-inflammatory phenotype, which is permissive to NSC survival and neuronal differentiation. We have also identified some of the microglial products (e.g. TNF-a, IL-1a) regulating NSC fate. Our studies contribute to unveil key cellular and molecular mediators modulating the NSC niche and support the innovative view that specific aspects of neuroinflammation should be reconsidered as potentially beneficial for neurogenesis and repair.

Altri partecipanti alla ricerca

Stefano Biagioni SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica

Partner della ricerca

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Davide Cacchiarelli

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Dipartimento : Biologia e biotecnologie "Charles Darwin"

Role of microRNA in Duchenne muscular dystrophy and in muscle differentiation

Ruolo dei microRNA nella distrofia muscolare di Duchenne e nel differenziamento muscolare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CELL METABOLISM

Titolo : MicroRNAs involved in molecular circuitries relevant for the Duchenne muscular dystrophy pathogenesis are controlled by the dystrophin/nNOS pathway.

Autore/i : CACCHIARELLI D. and MARTONE J and GIRARDI E and CESANA M and INCITTI T and MORLANDO M and NICOLETTI C and SANTINI T and STHANDIER O and BARBERI L and AURICCHIO A and A. MUSARO' and BOZZONI I

Anno : 2010

Numero volume : 12,

Pagine da - a : 341--351

Issn : 1550-4131

Doi : 10.1016/j.cmet.2010.07.008

Nome rivista o titolo libro o atti conferenza : EMBO MOLECULAR MEDICINE

Titolo : miRNAs as serum biomarkers for Duchenne muscular dystrophy.

Autore/i : CACCHIARELLI D. and LEGNINI I and MARTONE J and CAZZELLA V and D'AMICO A and BERTINI E and I. BOZZONI

Anno : 2011

Numero volume : 3,

Pagine da - a : 258--265

Issn : 1757-4676

Doi : 10.1002/emmm.201100133

Nome rivista o titolo libro o atti conferenza : EMBO REPORTS

Titolo : miR-31 modulates dystrophin expression: new implications for Duchenne muscular dystrophy therapy.

Autore/i : CACCHIARELLI D. and INCITTI T and MARTONE J and CESANA M and CAZZELLA V and SANTINI T and STHANDIER O and I. BOZZONI

Anno : 2011

Numero volume : 12,

Pagine da - a : 136--141

Issn : 1469-221X

Doi : 10.1038/embor.2010.208

MACROAREA : A

Mauro Tomassetti
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Reliable new immunosensor for triazinic pesticides analysis in real matrices

Un nuovo immunosensore per l'analisi di pesticidi triazinici in matrici reali.

Immunosensor devices for determination of triazinic pesticides based on two different competition procedures were studied. High selective and sensitive amperometric immunosensors for atrazine analysis was developed. The immunosensors developed used an amperometric electrode for hydrogen peroxide as transducer and the peroxidase enzyme as marker. Results demostrated the full validity of this immunosensor method, which was optimized by comparing two different "competition" operating procedures. The results obtained using the new immunosensor were then compared with those found using an inhibition OPEE (Organic Phase Enzyme Electrode) for triazinic pesticide detection, which showed no selectivity toward different classes of triazinic, carbamate or organophosphate pesticides. The immunosensor developed displayed on the contrary an appreciable selectivity both toward different classes of pesticides and toward triazinic or benzotriazinic products. In addition, the Kaff value was evaluated. Lastly, the best immunosensor was also used to evaluate triazinic pesticide recovery from common real matrices such as milk and vegetal samples, obtaining good recoveries.

Altri partecipanti alla ricerca

Elisabetta Martini	Under 40	SSD : CHIM/01 - Chimica analitica
Luigi Campanella		SSD : CHIM/01 - Chimica analitica
Dalina Lelo		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Sensors and Actuators B: Chemical
Titolo : Reliable new immunosensor for atrazine pesticide analysis
Autore/i : Campanella L., Eremin S., Lelo D., Martini E., Tomassetti M.
Anno : 2011
Numero volume : 156
Pagine da - a : 50-62

Nome rivista o titolo libro o atti conferenza : Anal. Lett.
Titolo : Investigation of interfering species in phytodrug analysis using an inhibition tyrisinase enzyme electrode working both in water and in organic solvent
Autore/i : Campanella L., Lelo D., Martini E., Tomassetti M.
Anno : 2008
Numero volume : 41(7)
Pagine da - a : 1106-1127

Nome rivista o titolo libro o atti conferenza : Anal. Chim. Acta
Titolo : Organophosphorus and carbamate pesticide analysis using an inhibition tyrosinase organic phase enzyme sensor; comparison by butyrylcholonesterase + choline oxidase opee and application to natural waters.
Autore/i : Campanella L., Lelo D., Martini E., Tomassetti M.
Anno : 2007
Numero volume : 587(1)
Pagine da - a : 22-32

MACROAREA : A

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Mesoscopic order in ionic liquids: experimental and computational evidences.

Ordine su scala mesoscopica in sali liquidi: studio sperimentale e computazionale.

Ionic liquids (ILs) represent an exciting novel class of materials, whose smart properties find a wide range of applications. ILs are composed solely of ionic species and are liquid under 100℃. They are composed of asymmetric ions and/or bear alkyl chains that destabilize the crystalline phases and lead to low melting temperature.
In the framework of this project we explored structural and dynamic properties of a variety of ILs, aiming to rationalize several puzzling bulk properties in terms of microscopic details.
Among the most vibrant results, we used synchrotron X-ray- and reactor neutron- scattering to deliver the very first experimental evidence of mesoscopic structural order in bulk ILs. This feature turns out to be ubiquitous in ILs and is the consequence of the segregation of apolar (alkyl) moieties in the 3-D network formed by the coulombic-interacting parts. Such a structural heterogeneity affects all the aspects of the chemical physics of ILs, including solvation, dynamics, and transport.
The dynamical implications of this complex morphology were studied using Neutron Spin Echo.A rationalization of these experimental findings is achieved using state of the art Molecular dynamics simulations.
The relevant publications have received hundreds citations (ISI-WOS).

Altri partecipanti alla ricerca

Ruggero Caminiti SSD : CHIM/02 - Chimica fisica

Partner della ricerca

Dr. Gontrani Lorenzo (CNR-ISM Tor Vergata Roma)
Dr. Triolo Alessandro (CNR-ISM Tor Vergata Roma)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY B
Titolo : Nanoscale Segregation in Room Temperature Ionic Liquids
Autore/i : Alessandro Triolo, Olga Russina Hans-Jurgen Bleif Emanuela Di Cola
Anno : 2007
Numero volume : 111
Pagine da - a : 4641-4644
Issn : 1520-6106
Doi : 10.1021/jp067705t
Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICS-CONDENSED MATTER
Titolo : Morphology and intermolecular dynamics of 1-alkyl-3-methylimidazolium bis{(trifluoromethane)sulfonyl}amide ionic liquids: structural and dynamic evidence of nanoscale segregation
Autore/i : Olga Russina, Alessandro Triolo, Lorenzo Gontrani, Ruggero Caminiti, Dong Xiao, Larry G Hines Jr, Richard A Bartsch Edward L Quitevis, Natalia Plechkova, Kenneth R Seddon
Anno : 2009
Numero volume : 21 (42)

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY B
Pagine da - a : 424121
Issn : 0953-8984
Doi : 10.1088/0953-8984/21/42/424121
Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY B
Titolo : Liquid Structure of Trihexyltetradecylphosphonium Chloride at Ambient Temperature: An X-ray Scattering and Simulation Study
Autore/i : Lorenzo Gontrani; Russina Olga; Lo Celso Fabrizio; Caminiti Ruggero; Annat Gary; Triolo Alessandro
Anno : 2009
Numero volume : 113
Pagine da - a : 9235-9240
Issn : 1520-6106
Doi : 10.1021/jp808333a

MACROAREA : A

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Stereoselectivity in the synthesis and amination reactions of nitro olefins

Stereoselettività nelle reazioni di sintesi ed amminazione di nitro olefine

Nitro olefins are valuable intermediates in organic chemistry and we are now interested in their synthesis and reactivity. A new highly stereoselective one-pot synthesis of either (E)- or (Z)-nitro olefins, using piperidine and 4 Å MS as catalysts has been discovered by our group. Especially for the rare Z isomer, a different reaction pathway has been proposed. (±)-bis(Nitroaziridines) have been obtained by a direct aza-MIRC (Michael Initiated Ring Closure) reaction on (E,E)-1,4-dialkyl-2,3-dinitro-l,3-butadienes under very mild conditions. The reactions occur with high stereoselectivity as shown by the enantioselective HPLC analyses performed on the crude mixtures. Ring-enlargement to bis(4,5-dihydro-1,2,4-oxadiazoles-2-oxides) has been easily obtained by simple treatment with sodium iodide in DMSO, with an unforeseen regioselective aziridine C-C cleavage.
After a careful HPLC separation of racemic 2,2'-dinitro-2,2'-biaziridine, the absolute configuration of both enantiomers has been determined by vibrational circular dichroism (VCD) spectroscopy in the mid-IR region and DFT calculations. Electronic circular dichroism (ECD) spectra have been obtained and Time-Dependent DFT (TDDFT)calculations have been performed and found to be in agreement with the conclusion from VCD and DFT.

Altri partecipanti alla ricerca

Francesco Gasparrini		SSD : CHIM/06 - Chimica organica
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Stefania Fioravanti		SSD : CHIM/06 - Chimica organica
Maria Cecilia Vergari	Under 40	SSD : CHIM/06 - Chimica organica

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Dipartimento di Scienze Biomediche e BiotecnologieUniversità degli Studi di Brescia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF ORGANIC CHEMISTRY
Titolo : Solving the Puzzling Absolute Configuration Determination of a Flexible Molecule by VCD and ECD Spectroscopies and DFT Calculations: the Case Study of a Chiral 2,2'-Dinitro-2,2'-biaziridine
Autore/i : S. ABBATE and A. CIOGLI and S. FIORAVANTI and F. GASPARRINI and G. LONGHI and PELLACANI L.

Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF ORGANIC CHEMISTRY
and E. RIZZATO and D. SPINELLI and P. A. TARDELLA
Anno : 2010
Pagine da - a : 6193--6199
Issn : 1434-193X
Doi : 10.1002/ejoc.201000762
Nome rivista o titolo libro o atti conferenza : JOURNAL OF ORGANIC CHEMISTRY
Titolo : An Unexpected Highly Stereoselective Bisaziridination of (E,E)-1,4-Dialkyl-2,3-dinitrobutadienes Followed by a Nitro Group Driven Ring Enlargement
Autore/i : A. CIOGLI and S. FIORAVANTI and F. GASPARRINI and PELLACANI L. and E. RIZZATO and D. SPINELLI and P. A. TARDELLA
Anno : 2009
Numero volume : 74,
Pagine da - a : 9314--9318
Issn : 0022-3263
Doi : 10.1021/jo902112j
Nome rivista o titolo libro o atti conferenza : ORGANIC LETTERS
Titolo : Facile and highly stereoselective one-pot synthesis of either (E)- or (Z)-nitro alkenes
Autore/i : S. FIORAVANTI and PELLACANI L. and P. A. TARDELLA and M. C. VERGARI
Anno : 2008
Numero volume : 10,
Pagine da - a : 1449--1451
Issn : 1523-7060
Doi : 10.1021/ol800224k

MACROAREA : A

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Advanced nano-composite membranes for hydrogen fuel cells

Materiali polimerici nanocompositi per celle a combustibile alimentate ad idrogeno

Nowadays, polymer electrolyte fuel cells represent a key technology for high efficiency and low environmental impact energy production. Possible applications of these hydrogen fuelled systems are expected in highly strategic fields such as sustainable transportation by electric and hybrid vehicles. Large scale research efforts are still needed to meet the efficiency, durability and cost requirements for hydrogen fuel cells. Developing low-cost durable membrane electrolytes that tolerate a wide range of operating conditions is one of the main challenge.

The scope of our work was to prepare and characterize innovative nano-composite, organic/inorganic hybrid membranes for polymer electrolyte fuel cells operating from subzero to 120 ℃ at low relative humidity. The inve stigation aimed at considering some well known problems, not yet satisfactorily approached, which strongly limit the commercialization of these systems, such as the strong dependence of the polymer electrolyte performances on humidification and the relatively short durability of materials and components under critical working conditions. A deep insight on both micro and macroscopic levels was achieved on materials of interest and many technological issues for practical use were addressed.

Altri partecipanti alla ricerca

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Partner della ricerca

Chalmers University of Technology, Göteborg, Svezia

Hunter College of The City University of New York, USA

Case Western Reserve University, Cleveland, Ohio, USA

Università di Roma "Tor Vergata"

Università di Chieti "G. D'Annunzio"

Tokyo University of Agriculture and Technology, Tokyo, Giappone

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CHEMISTRY OF MATERIALS

Titolo : Composite Nafion/sulfonated zirconia membranes: effect of the filler surface properties on proton transport characteristics

Autore/i : D'EPIFANIO A and NAVARRA M. and WEISE F and MECHERI B and FARRINGTON J and LICOCCIA S and GREENBAUM S

Anno : 2010

Numero volume : 22,

Pagine da - a : 813--821

Issn : 0897-4756

Doi : 10.1021/cm901486t

Nome rivista o titolo libro o atti conferenza : JOURNAL OF POWER SOURCES

Titolo : Properties and fuel cell performance of a Nafion-based, sulfated zirconia-added, composite membrane

Autore/i : NAVARRA M. and C. ABBATI and B. SCROSATI

Anno : 2008

Numero volume : 183,

Pagine da - a : 109--113

Issn : 0378-7753

Doi : 10.1016/j.jpowsour.2008.04.033

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MATERIALS CHEMISTRY

Titolo : New, high temperature superacid zirconia-doped NafionTM composite membranes

Autore/i : NAVARRA M. and F. CROCE and B. SCROSATI

Anno : 2007

Numero volume : 17,

Pagine da - a : 3210--3215

Issn : 0959-9428

Doi : 10.1039/b702322g

MACROAREA : A

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Chiral Multiple Catalysis: a new Tool for Asymmetric Synthesis

Catalisi Chirale Multipla: un nuovo Strumento per la Sintesi Asimmetrica

This research is aimed to the develop a new strategy for asymmetric synthesis: the Chiral Multiple Catalysis or the catalysis of asymmetric reaction by two distinct, non-covalently bonded chiral units.
Important chiral molecules are drugs, fragrances, agrochemicals and the industry is eagerly looking to prepare every chiral molecule only as single enantiomer. A recent review by the PI (Angew. Chem. 2011) is featured on this leading journal front cover. It describes and highlights the perspectives of the transformations known to date which employ more than one chiral catalyst; this critical overview of the state of the art witnesses the interest from the scientific community in such topic. Applications of the new developed reactions will be in the fields of total synthesis, supramolecular chemistry, asymmetric synthesis, nanotechnologies, medicinal chemistry. Some exciting preliminary results constitute an important proof of concept. (Chem. Commun. 2009)
This research reflects the scientific background of the PI, who has strong experience in asymmetric metal catalysis, total synthesis and organocatalysis. The project will not only develop excellent science, but it has also ambitious educational objectives: scientists involved will receive a high profile research training.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ORGANIC LETTERS
Titolo : Biomimetic Organocatalytic Asymmetric Synthesis of 2-Substituted Piperidine-Type Alkaloids and Their Analogues
Autore/i : Mattia R. Monaco, Polyssena Renzi, Daniele M. Scarpino Schietroma, Marco Bella*
Anno : 2011
Numero volume : 13
Pagine da - a : 4546-4549
Issn : 1523-7060
Doi : 10.1021/ol2017406
Nome rivista o titolo libro o atti conferenza : CHEMICAL COMMUNICATIONS
Titolo : Synergic asymmetric organocatalysis (SAOc) of Cinchona alkaloids and secondary amines in the synthesis of bicyclo[2.2.2]octan-2-ones
Autore/i : Bella Marco*; Schietroma Daniele M. Scarpino; Cusella Pier Paolo; Gasperi Tecla
Anno : 2009
Pagine da - a : 597-599
Issn : 1359-7345
Doi : 10.1039/b816550e
Nome rivista o titolo libro o atti conferenza : ANGEWANDTE CHEMIE-INTERNATIONAL EDITION
Titolo : Multiple Catalysis with Two Chiral Units: An Additional Dimension for Asymmetric Synthesis
Autore/i : Piovesana Susy; Schietroma Daniele M. Scarpino; Bella Marco*
Anno : 2011
Numero volume : 50
Pagine da - a : 6216-6232
Issn : 1433-7851
Doi : 10.1002/anie.201005955

MACROAREA : A

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DIFFERENTIAL PROTEOMICS FOR STUDYING INTERACTION BETWEEN NANOSTRUCTURE, PROTEINS AND CELLS

PROTEOMICA DIFFERENZIALE PER LO STUDIO DELL'INTERAZIONE TRA NANOSTRUTTURE, PROTEINE E CELLULE

The majority of gene therapy experiments and clinical trials currently use viral vectors, but in several aspects non-viral delivery systems have clear advantages over viral delivery systems such as preparation reproducibility, lack of immunogenicity and almost no size limit to the piece of DNA carried into cells. Among non-viral nano-vectors, cationic liposomes (CLs) are the most promising candidates for gene transfer. Plasma proteins play an important role in recognizing foreign bodies entering into the blood circulation. Specific proteins are involved in eliciting an immunological response to pathogens or in assisting their clearance by the reticuloendothelial system. A better understanding of the nature of this protein absorption is an urgent task for comprehending their biological responses.

In this research, we have investigated the binding of human plasma proteins on the surface of various liposome formulation, and respective DNA-liposome complexes (lipoplexes). For this purpose, we have employed a shotgun proteomics approach with a nano-high performance liquid chromatography system coupled to a high resolution Orbitrap LTQ-XL mass spectrometer. This combined approach is expected to develop a workflow specifically geared toward the efficient identification of adsorbed proteins.

Altri partecipanti alla ricerca

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Chiara Cavaliere	Under 40	SSD : CHIM/01 - Chimica analitica
Patrizia Foglia	Under 40	SSD : CHIM/01 - Chimica analitica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Analytical and Bioanalytical Chemistry
Titolo : Analysis of plasma protein adsorption onto DC-Chol-DOPE cationic liposomes by HPLC-CHIP coupled to a Q-TOF mass spectrometer
Autore/i : A. L. Capriotti, G. Caracciolo, G. Caruso, C. Cavaliere, D. Pozzi, R. Samperi, A. Laganà
Anno : 2010
Numero volume : 398
Pagine da - a : 2895-2903
Doi : 10.1007/s00216-010-4104-y
Nome rivista o titolo libro o atti conferenza : Proteomics
Titolo : DNA affects the composition of lipoplex protein corona: a proteomics approach
Autore/i : Anna Laura Capriotti, Giulio Caracciolo, Giuseppe Caruso, Patrizia Foglia, Daniela Pozzi, Roberto Samperi, Aldo Laganà
Anno : 2011
Numero volume : 11
Doi : 10.1002/pmic.201000803
Nome rivista o titolo libro o atti conferenza : Analytical and Bioanalytical Chemistry
Titolo : Shotgun proteomics analytical approach for studying proteins adsorbed onto liposome surface
Autore/i : Anna Laura Capriotti, Giulio Caracciolo, Chiara Cavaliere, Carlo Crescenzi, Daniela Pozzi, Aldo Laganà
Anno : 2011
Doi : 10.1007/s00216-011-5188-8

MACROAREA : A

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MULTIFUNCTIONAL NANOSTRUCTURED SYSTEMS: SYNTHESIS, CHARACTERIZATION AND APPLICATIVE STUDIES OF FUNCTIONALIZED METALLIC NANOPARTICLES AND NANOSTRUCTURED POLYMERS

SISTEMI NANOSTRUTTURATI MULTIFUNZIONALI: SINTESI, CARATTERIZZAZIONE ED APPLICAZIONI DI NANOPARTICELLE METALLICHE FUNZIONALIZZATE E POLIMERI NANOSTRUTTURATI.

In the last years great attention has been devoted to nanostructured materials. This field is extremely up to date due to the new properties of nanomaterials in optoelectronics, sensors, biotechnology and nowadays in biomedicine and cancer therapy. In this framework, nanostructured polymers and functionalized metal nanoparticles play fundamental roles.
This research deals with novel methods for the synthesis of: i) organometallic complexes and polymers containing Pt(II) or Pd(II) sites and conjugated bridging ligands; ii) gold or silver nanoparticles functionalized with organic and organometallic thiols; iii)nanostructured conjugated and non-conjugated polymers (spheres or fibres with diameter in the range 50-500 nm) with functional groups.
The obtained materials have been deeply investigated by means of traditional (FTIR, UV-Vis, NMR), and advanced spectroscopies (HRTEM, EXAFS, NEXAFS, SR-XPS, XRD).
Nanostructure formation has been controlled through the chemical synthesis and studied by microscopy based techniques (SEM, TEM). Bioactivity studies showed an improved performance of nanopolymers with respect to amorphous ones. Tests on the response in sensor devices for dosimetry and for the detection of gases and vapours have been carried out.

Altri partecipanti alla ricerca

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Maria Vittoria RUSSO		SSD : CHIM/03 - Chimica generale e inorganica

Partner della ricerca

Dott.ssa Chiara Battocchio, Prof. Giovanni polzonettiUniversità Roma Tre
Dott. Leander TapferENEA Centro Ricerche di Brindisi
prof. CFO GraeffUniversidad Bauru, San Paulo, BRASILE

Brevetti

the morphology of nanostructural polymeric materials, materials thereby obtained and uses thereof
PCT/IT20057000653 International Publication Number WO 2006051572 A3 20060518

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Langmuir?
Titolo : Dielectric Relaxations of Ionic Thiol-Coated Noble Metal Nanoparticles in Aqueous Solutions: Electrical Characterization of the Interface
IF 4.27
Autore/i : Cesare Cametti, Ilaria Fratoddi, Iole Venditi, Maria Vittoria Russo
Anno : 2011
Numero volume : 27 (11)
Pagine da - a : 7084?7090
Doi : 10.1021/la2007827
Nome rivista o titolo libro o atti conferenza : Journal of Physical Chemistry B
Titolo : Optical Behavior of Conjugated Pt-Containing Polymetallaynes Exposed to Gamma-Ray Radiation Doses

Nome rivista o titolo libro o atti conferenza : Langmuir?
IF 3.61
Autore/i : A. Batagin-Neto, E. S. Bronze-Uhle, D. M. Fernandes, Ilaria Fratoddi, I. Venditti, F. Decker, E. Bodo, M. V. Russo, C. F. O. Graeff
Anno : 2011
Numero volume : 115 (25)
Pagine da - a : 8047¿8053
Doi : 10.1021/jp200831z
Nome rivista o titolo libro o atti conferenza : Journal of Physical Chemistry C
Titolo : GOLD NANOPARTICLES DYADS STABILIZED WITH BINUCLEAR Pt(II) DITHIOL BRIDGES
IF 4.52
Autore/i : Ilaria Fratoddi, Iole Venditti, Chiara Battocchio, Giovanni Polzonetti, Federica Bondino, Marco Malvestuto, Emanuela Piscopiello, Leander Tapfer, Maria Vittoria Russo
Anno : 2011
Doi : DOI: 10.1021/jp202717t

MACROAREA : A

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Role of novel macrocyclic porphyrazines as potential multimodal anticancer agents

Nuovi macrocicli porfirazinici come agenti anticancro con potenzialità multimodali

Photodynamic therapy (PDT) is a very promising anticancer therapy nowadays in use and under investigation for further improvement. The therapy requires the combined action of light, dioxygen and a photosensitizer which is able to absorb energy in the phototherapeutic spectral window (600-850 nm) and release energy to dioxygen generating singlet oxygen, 1O2, believed to be the initial cytotoxic agent in PDT. Porphyrins have been intensively studied as photosensitizers, and some have found clinical applications like Photofrin, an oligomer of natural hematoporphyrin. However, they have weak absorptions in the phototherapeutic window and induce long-lasting skin photosensitivity. Noteworthy, phthalocyanines have been actively considered as promising photosensitizers in PDT, because they show intense absorption bands in the therapeutic window. Moreover, the photoactivity for the production of singlet oxygen of differently substituted tetrapyrazinoporphyrazines, secoporphyrazines, and benzonaphthoporphyrazines has also been investigated. Among the current active molecules for cancer treatment, cis-platin, i.e. cis(diamine)dichloroplatinum(II), is one of the most active chemotherapeutic drugs widely used to contrast a variety of tumors, with only a few other analogues (carboplatin, oxaliplatin) apparently only approaching the efficacy of the basic material.
The synergic action of the two curative combined modalities, ie. PDT and cis-platin based chemotherapy, is obviously a very attractive target deserving exploration. In the area of tetrapyrrolic macrocycles, studies were reported where porphyrin photosensitizers and cis-platin were two distinct molecular systems and others in which porphyrins carry a cis-platin-like function directly inserted peripherally. Moving to phthalocyanines or porphyrazines, which face problems of insolubility in water, we are aware of rare reports on the anticancer activity of phthalocyanines and cis-platin tested as separate entities or joined together in the same molecular framework.
Our research is devoted to the synthesis and characterization of differently functionalized porphyrazine macrocycles potentially able to act as multimodal therapeutic anticancer drugs involving photodynamic therapy (PDT), chemotherapeutic cis-platin-like activity, or able to interact with G-quadruplex structures. New research work is also directed to verify potentialities for the contrast to tumors by BNCT (Boron Neutron Capture Therapy), this last involving radiations generated from the capture reaction of thermal neutrons by the 10B nuclide.

Altri partecipanti alla ricerca

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Giorgia De Mori	Under 40	SSD : CHIM/03 - Chimica generale e inorganica
Daniela Vittori	Under 40	SSD : CHIM/03 - Chimica generale e inorganica
Giuliano Moretti		SSD : CHIM/03 - Chimica generale e inorganica

Brevetti

Nuovi Complessi di Pd(II) di Tipo Porfirazinico Mono- e Pentametallici Come Fotosensibilizzatori in Soluzione di DMF per la Produzione di Ossigeno di Singoletto, 1O2. Patent: RM2007A000571 (29/10/07)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INORGANIC CHEMISTRY
Titolo : Tetra-2,3-pyrazinoporphyrazines with Externally Appended Pyridine Rings. 8. Central (Zn-II, Cu-II, Mg-II(H2O), Cd-II) and Exocyclic (Pd-II) Metal Ion Binding in Heteropentametallic Complexes from Tetrakis-2,3-[5,6-di(2-pyridyl)pyrazino]porphyrazine
Autore/i : DONZELLO MP and VIOLA E and CAI XH and MANNINA L and ERCOLANI C and KADISH KM
Anno : 2010
Numero volume : 49,
Pagine da - a : 2447--2456
Issn : 0020-1669
Doi : 10.1021/ic902317h
Nome rivista o titolo libro o atti conferenza : INORGANIC CHEMISTRY
Titolo : Structural, UV-Visible, and Electrochemical Studies on 2,3-Dicyano-5,6-di-2-pyridylpyrazine, [(CN)(2)Py(2)Pyz], Related Species and Its Complexes [(CN)(2)Py(2)PyzMCl(2)] (M
Autore/i : CAI XH and DONZELLO MP and VIOLA E and RIZZOLI C and ERCOLANI C and KADISH KM
Anno : 2009
Numero volume : 48,
Pagine da - a : 7086--7098
Issn : 0020-1669
Doi : 10.1021/ic8023277
Nome rivista o titolo libro o atti conferenza : INORGANIC CHEMISTRY
Titolo : Tetra-2,3-pyrazinoporphyrazines with externally appended pyridine rings. 6. Chemical and redox properties and highly effective photosensitizing activity for singlet oxygen production of penta- and monopalladated complexes in dimethylformamide solution
Autore/i : DONZELLO MP and VIOLA E and BERGAMI C and DINI D and ERCOLANI C and GIUSTINI M and KADISH KM and MENEGHETTI M and MONACELLI F and ROSA A and RICCIARDI G
Anno : 2008
Numero volume : 47,
Pagine da - a : 8757--8766
Issn : 0020-1669
Doi : 10.1021/ic800678m

MACROAREA : A

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The nanoscopic structure of ionic liquids: theoretical studies.

Studi teorici sulla nano-struttura dei liquidi ionici.

It is hard to overemphasize the relevance of new materials both in applied and academic science. Among the most exciting and successful materials developed in the last twenty years, ionic liquids can certainly claim one of the most rich field of applications in industry and in applied technological research. Conventionally, ionic liquids are chemicals entirely made by ions that show a melting point below 100 C: their negligible vapor pressure, high thermal stability, large tunability of several properties have contributed in establishing them as "green solvents". The main focus of this research project is a combined theoretical and experimental description of the structural and dynamical properties of ionic liquids in bulk phase or in the presence of specific solutes. A study of this kind is certainly very general and aims at the understanding of fundamental principles about the organization of ionic liquids around the solutes at the nanometric scale. Such a study is necessary because of the many application in which ionic liquids are employed as an extraction and reaction media or as an electrochemical solvent. Many, if not most, of these applications fall within the quest for new energetic sources such as fuel or solar cells or new environmentally benign technologies.

Altri partecipanti alla ricerca

Ruggero Caminiti SSD : CHIM/02 - Chimica fisica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY. A, MOLECULES, SPECTROSCOPY, KINETICS, ENVIRONMENT, & GENERAL THEORY
Titolo : The Structure of Geminal Imidazolium Bis(trifluoromethylsulfonyl)amide Ionic Liquids A Theoretical Study of the Gas Phase Ionic Complexes
Autore/i : BODO E. and CAMINITI R
Anno : 2010
Numero volume : 114,
Pagine da - a : 12506--12512
Issn : 1089-5639
Doi : 10.1021/jp107023b

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY. B, CONDENSED MATTER, MATERIALS, SURFACES, INTERFACES & BIOPHYSICAL
Titolo : Structural Properties of 1-Alkyl-3-methylimidazolium Bis (trifluoromethyl)sulfonyl}amide Ionic Liquids: X-ray Diffraction Data and Molecular Dynamics Simulations
Autore/i : BODO E. and GONTRANI L and CAMINITI R and PLECHKOVA NV and SEDDON KR and TRIOLO A
Anno : 2010
Numero volume : 114,
Pagine da - a : 16398--16407
Issn : 1520-6106
Doi : 10.1021/jp1093299

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF PHYSICAL CHEMISTRY LETTERS
Titolo : Structural determination of Ionic Liquids with theoretical methods: C8mimBr and C8mimCl
Autore/i : BODO E. and L. GONTRANI and A. TRIOLO and AND R. CAMINITI
Anno : 2010

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PHYSICAL CHEMISTRY. A, MOLECULES, SPECTROSCOPY, KINETICS, ENVIRONMENT, & GENERAL THEORY
Numero volume : 1,
Pagine da - a : 1095--1100
Issn : 1948-7185

MACROAREA : A

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Telomerase inhibitors as potential antitumoral

Inibitori della telomerasi come possibili antitumorali

Topics

1) G-quadruplex ligands

A range of G-quadruplex ligands have been shown to bind quadruplex in vitro. Features shared by many of these ligands include a large flat aromatic surface, presence of cationic charge and ability to adopt a terminal staking mode.

2) Detection of new natural compounds G-quadruplex ligands.

A further aim will be the identification of natural compounds as G-quadruplex ligands, by means of an appropriate screening process. The main attention will be focused on basic molecules characterized by a large aromatic area, especially in the field of aromatic alkaloids.

3) Study of the interaction with duplex or quadruplex DNA.

The study of the interactions of the isolated and synthesized compounds with different G-quadruplex structures will done with ESI-MS technique that can provide data on the functional properties complexes between nucleic acids and small molecules. On this basis we have recently developed a new method to study the quadruplex vs duplex selectivity.

4) Biological activity

Compounds showing a good interaction with the G-quadruplex will be analyzed for their ability to inhibit human telomerase. Successively the biological study will be addressed to their cytotoxicity towards tumor and normal cell lines.

Altri partecipanti alla ricerca

Marcella Guiso		SSD : CHIM/06 - Chimica organica
Giancarlo Ortaggi	Under 40	SSD : CHIM/06 - Chimica organica
Maria Savino		SSD : CHIM/02 - Chimica fisica
Stefano Cacchione		SSD : BIO/11 - Biologia molecolare

Partner della ricerca

Prof. Luciano Mayol, Dipartimento di Chimica delle Sostanze Naturali, Facoltà di Farmacia, Università degli Studi di Napoli "Federico II"

Dott.ssa Giovanna Mancini. Istituto di metodologie chimiche del Consiglio Nazionale delle Ricerche, Sezione "Meccanismi di Reazione", Dipartimento di Chimica, Università "La Sapienza"

Professor Stephen Neidle, Cancer Research UK Biomolecular Structure Group (The School of Pharmacy, University of London)

Dr.ssa Annamaria Biroccio, Dipartimento di Oncologia Sperimentale, Laboratorio di Chemioterapia Sperimentale Preclinica (Istituto Nazionale Tumori Regina Elena IRCCS - Roma)

Brevetti

Derivati coronenici idrosolubili attivi come inibitori della telomerasi umana mediante induzione di strutture G-quadruplex e loro uso come agenti antitumorali". UNIVERSITÀ DEGLI STUDI DI ROMA ¿LA SAPIENZA¿ Brevetto Italiano RM2007 A000209.

Ciclotrimeri simmetrici di eterocicli aromatici come ligandi selettivi di strutture g-quadruplex su dna telomerico umano: nuovi potenziali antitumorali. Brevetto Italiano RM2009 A000197RM2007 A000209.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : BIOORGANIC & MEDICINAL CHEMISTRY

Titolo : The number and distances of positive charges of polyamine side chains in a series of perylene diimides significantly influence their ability to induce G-quadruplex structures and inhibit human telomerase.

Autore/i : M.FRANCESCHIN and C.M.LOMBARDO and E.PASCUCCI and D.DAMBROSIO and E.MICHELI and BIANCO A. and G.ORTAGGI and M. SAVINO

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF MEDICAL AND BIOLOGICAL FRONTIERS

Titolo : G-QUADRUPLEX LIGANDS: A SELECTIVE APPROACH TO TELOMERES LENGTH REGULATION, BOTH DIRECTLY AND THROUGH TELOMERASE INHIBITION

Autore/i : FRANCESCHIN M and BIANCO A. and SAVINO M

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MASS SPECTROMETRY

Titolo : Study of binding affinity and selectivity of perylene and coronene derivatives towards duplex and quadruplex DNA by ESI-MS. Journal of Mass Spectrometry

Autore/i : V.CASAGRANDE and A.ALVINO and BIANCO A. and G.ORTAGGI and M.FRANCESCHIN

MACROAREA : A

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New arylthioindole antitumor agents inhibit tubulin polymerization, reduce cell growth of P-glycoprotein-overexpressing cells, show good metabolic stability and excellent oral bioavailability.

Nuovi agenti antitumorali ariltioindolici inibiscono della polimerizzazione della tubulina, riducono la crescita di cellul che over-esprimono la glicoproteina P, mostrano buona stabilità metabolica ed eccellente biodisponibilittà orale.

New arylthioindoles (ATIs) were obtained by replacing the 2-alkoxycarbonyl group with a bioisosteric 5-membered heterocycle nucleus. The new ATIs inhibited tubulin polymerization, reduced cell growth of a panel of human transformed cell lines and showed higher metabolic stability than the reference ester. These compounds induced mitotic arrest and apoptosis at a similar level as combretastatin A-4 and vinblastine and triggered caspase-3 expression in a significant fraction of cells in both p53-proficient and p53-defective cell lines. Importantly, the new ATIs were more effective than vinorelbine, vinblastine and paclitaxel as growth inhibitors of the P-glycoprotein-overexpressing cell line NCI/ADR-RES. The compounds were shown to have medium metabolic stability in both human and mouse liver microsomes, in contrast to the rapidly degraded reference ester, and a pharmacokinetic profile in the mouse characterized by a low systemic clearance and excellent oral bioavailability. These results strongly support the therapeutic potential of the new ATIs as novel antimitotic drugs.

Altri partecipanti alla ricerca

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Partner della ricerca

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CNR, National Research Council, Institute of Molecular Biology and Pathology, Roma.
Dipartimento di Scienze Farmaceutiche, Sezione Biomedica, Università di Salerno, Fisciano, Salerno
Danbury Hospital Research Institute, Tumor Reproductive Biology Research Laboratory, Danbury, Connecticut, USA
Istituto Pasteur ¿ Fondazione Cenci Bolognetti
NiKem Research Srl, Via Zambeletti 25, 20021 Baranzate, Milano,
European Institute of Oncology, Via Adamello 16, 20139 Milano
Genextra Group, DAC SRL, Via Adamello 16, 20139 Milano

Brevetti

DERIVATI INDOLICI E LORO USO IN CAMPO MEDICO, RM2010A000151
INDOLIC DERIVATIVES AND USE THEREOF IN MEDICAL FIELD - PCT 28220

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ACS Combinatorial Science
Titolo : Open vessel and cooling while heating microwave-assisted synthesis of pyridinyl N-aryl hydrazones.
Autore/i : G. La Regina, V. Gatti, F. Piscitelli, R. Silvestri.
Anno : 2011
Numero volume : 13
Pagine da - a : 2-6
Doi : 10.1021/co100015b
Nome rivista o titolo libro o atti conferenza : PLOs ONE 2010, 5, e11603, 1-13.
Titolo : A screen for kinetochore-microtubule interaction inhibitors identifies novel antitubulin compounds.
Autore/i : E. Screpanti, S. Santaguida, T. Nguyen, R. Silvestri, R. Gussio, A. Musacchio, E. Hamel, P. De Wulf.
Anno : 2010
Numero volume : 5, e11603
Pagine da - a : 1-13
Doi : 10.1371/journal.pone.0011603.g008
Nome rivista o titolo libro o atti conferenza : J. Med. Chem.
Titolo : New arylthioindoles and related bioisosteres at the sulfur bridging group. 4. Synthesis, tubulin polymerization, cell growth inhibition, and molecular modeling studies.
Autore/i : G. La Regina, et al., B. Maresca, E. Hamel, A. Brancale, E. Novellino, R. Silvestri.
Anno : 2009
Numero volume : 52
Pagine da - a : 7512-7527
Doi : 10.1021/jm900016t

MACROAREA : A

Dante Rotili

Under 40
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Development of chemical probes for epigenetic enzymes with cancer implications.

Sviluppo di sonde chimiche per enzimi epigenetici con implicazioni nel cancro.

The 2-oxoglutarate (2-OG) dependent oxygenases called jumonji histone demethylases catalyze a range of histone lysine N-methyl demethylation reactions that play a crucial role in the epigenetic modulation of gene expression, and have been recently proposed as novel anticancer targets. We developed small-molecule and peptide-based probes for 2-OG oxygenases that employ enzyme inhibitors and substrates coupled to a photo cross-linker and a biotin molecule as affinity purification tag. Following studies with recombinant proteins, we demonstrated that this probe-based approach is useful for the functional isolation and identification of 2-OG oxygenases in human cell extracts at endogenous levels, and for profiling the interactions between these enzymes and their inhibitors. We validated the approach by identifying the first inhibitors reported in literature of the histone demethylase FBXL11 (KDM2A). We also demonstrate the potential of this probe-based approach to study enzyme-substrate and protein-protein interactions, and also to identify endogenous substrates of 2-OG oxygenases. Since a complete functional characterization of histone demethylases as well as of sirtuins (another class of epigenetic enzymes also indicated as class III histone deacetylases) is presently a challenge, especially considering their involvement in cancer, we are now working in the development of probes for both these targets following a medicinal chemistry and a chemical biology approach.

Altri partecipanti alla ricerca

Antonello Mai		SSD : CHIM/08 - Chimica farmaceutica
Sergio Valente	Under 40	SSD : CHIM/08 - Chimica farmaceutica

Partner della ricerca

Dott. Mario FragaUniversidad de Oviedo (Spain)

Dott. Benedikt M. KesslerNuffield Department of MedicineUniversity of Oxford (UK)

Prof.Christopher J. SchofieldDepartment of Chemistry University of Oxford (UK)

Prof.ssa Lucia Altucci Dipartimento di Patologia GeneraleFacoltà di Medicina e ChirurgiaSeconda Università di Napoli

Prof. Aleksey G. KazantsevMassachusetts General Hospital,Harvard University (USA)

Prof. Xiaodong ChengEmory University, Atlanta (USA)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CHEMICAL COMMUNICATIONS

Titolo : Photoactivable peptides for identifying enzyme-substrate and protein-protein interactions.

Autore/i : ROTILI D., ALTUN M, HAMED RB, LOENARZ C, THALHAMMER A, HOPKINSON RJ, TIAN YM, RATCLIFFE PJ, MAI A, KESSLER BM, SCHOFIELD CJ

Anno : 2011

Numero volume : 47

Pagine da - a : 1488-1490

Issn : 1359-7345

Nome rivista o titolo libro o atti conferenza : Chemistry and Biology

Titolo : A photoreactive small-molecule probe for 2-oxoglutarate oxygenases.

Autore/i : ROTILI D., ALTUN M, KAWAMURA A, WOLF A, FISCHER R, LEUNG IK, MACKEEN MM, TIAN YM, RATCLIFFE PJ, MAI A, KESSLER BM, SCHOFIELD CJ

Anno : 2011

Numero volume : 18

Pagine da - a : 642-654

Issn : 1074-5521

Doi : 10.1016/j.chembiol.2011.03.007

Nome rivista o titolo libro o atti conferenza : ONCOGENE

Nome rivista o titolo libro o atti conferenza : CHEMICAL COMMUNICATIONS
Titolo : Salermide, a Sirtuin inhibitor with a strong cancer-specific proapoptotic effect.
Autore/i : LARA E, MAI A, CALVANESE V, ALTUCCI L, LOPEZ-NIEVA P, MARTINEZ-CHANTAR ML, VARELA-REY M, ROTILI D., NEBBIOSO A, ROPERO S, MONTOYA G, OYARZABAL J, VELASCO S, SERRANO M, WITT M, VILLAR-GAREA A, INHOF A, MATO JM, ESTELLER M, FRAGA MF
Anno : 2009
Numero volume : 28
Pagine da - a : 781-791
Issn : 0950-9232

MACROAREA : A

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In situ forming IPN polisaccharide hydrogel for biomedical applications

Formazione "in situ" di idrogel polisaccaridici interpenetrati per applicazioni biomediche.

The research program is focused on different kinds of innovative polysaccharide hydrogels and on their applications for the formulations of significantly innovative drug and protein release dosage forms as well as scaffolds for cell cultures and for the reconstruction of living tissues and organs. In their ability to retain a significant amount of water, hydrogels are quite similar to natural living tissues, rendering them useful for a wide variety of pharmaceutical and biomedical applications; in particular, polysaccharides are very attractive because of their abundance, large variety of composition, ease of chemical derivatization and, usually, good biocompatibility.
The aim of the research is the development of innovative hydrogels based on new polysaccharide networks.
The program is focused on:
1) Preparation of the hydrogels developing innovative structures and new materials - such as new polymers, novel crosslinking approaches, new Interpenetrated Polymer Networks (IPNs)capable to preserve drug and protein activity.
2) Physicochemical, mechanical and dynamo-mechanical characterization of the new systems
3) Preparation of matrices, such as films, micro- and nanospheres
4) Loading of the hydrogels with different drugs and/or proteins
5) Studies of biocompatibility

Altri partecipanti alla ricerca

Laura Pescosolido	Under 40	SSD : CHIM/09 - Farmaceutico tecnologico applicativo
Tommasina Coviello		SSD : CHIM/09 - Farmaceutico tecnologico applicativo
Franco Alhaique		SSD : CHIM/09 - Farmaceutico tecnologico applicativo

Partner della ricerca

Utrecht University, Sorbonnelaan 16, P.O. Box 80082, 3508 TB Utrecht, The Netherlands

Brevetti

ALHAIQUE F, MATRICARDI P., COVIELLO T (2006). PROCEDIMENTO PER L'OTTENIMENTO DI COMPOSIZIONI INIETTABILI A BASE DI GEL DI ALGINATO. BO2006A000172. ALHAIQUE F, MATRICARDI P.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Acta Biomaterialia
Titolo : In situ forming IPN hydrogels of calcium alginate and dextran-HEMA
for biomedical applications

Nome rivista o titolo libro o atti conferenza : Acta Biomaterialia
Autore/i : Laura Pescosolido, Tina Vermonden, Jos Malda, Roberta Censi, Wouter J.A. Dhert , Franco Alhaique,Wim E. Hennink, Pietro Matricardi
Anno : 2011
Numero volume : 7
Pagine da - a : 1627 - 1633
Doi : 10.1016/j.actbio.2010.11.040
Nome rivista o titolo libro o atti conferenza : Carbohydrate Polymers
Titolo : Biodegradable IPNs based on oxidized alginate and dextran-HEMA for controlled
release of proteins
Autore/i : Laura Pescosolidoa, Teresa Piro, Tina Vermonden, Tommasina Coviello, Franco Alhaique,Wim E. Hennink, Pietro Matricardi
Anno : 2011
Numero volume : 86
Pagine da - a : 208 ¿ 213
Doi : 10.1016/j.carbpol.2011.04.033
Nome rivista o titolo libro o atti conferenza : Biomacromolecules
Titolo : In Situ Cross-Linkable Novel Alginate-Dextran Methacrylate IPN
Hydrogels for Biomedical Applications: Mechanical
Characterization and Drug Delivery Properties
Autore/i : Pietro Matricardi,Marilena Pontoriero,Tommasina Coviello, Maria Antonietta Casadei,Franco Alhaique
Anno : 2008
Numero volume : 9
Pagine da - a : 2014 ¿ 2020
Doi : 10.1021/bm800252c

MACROAREA : A

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Non-ionic surfactant vesicles in pulmonary glucocorticoid delivery

Sistemi vescicolari da tensioattivi non ionici per la veicolazione polmonare di glucocorticoidi

Non-ionic surfactant vesicles (NSVs) were proposed for the pulmonary delivery of glucocorticoids such as beclomethasone dipropionate (BDP) for the treatment of inflammatory lung diseases, e.g. asthma, chronic obstructive pulmonary disease (CODP)and various type of pulmonary fibrosis. An ideal glucocorticoid delivery system is characterized by high pulmonary deposition efficiency, suitable pulmonary residence time and intracellular accessibility to reach the glucocorticoid cytoplasmic receptor. The abnormal production of mucus occurring in the case of COPD can dramatically reduce glucocorticoid absorption and hence the possibility to reach the cytoplasm receptor in bronchial epithelial cells.

In a previous investigation, the use of a NSVs for the pulmonary delivery of BDP for the treatment of CODP was proposed. In particular, it was evidenced that NSVs increase significantly the penetration rate of BDP through a model of mucosal barrier.The aim of this research was the deeper characterization of vesicular formulations and the evaluation of the interaction between our
innovative NSVs and human lung fibroblast(HLF) cells, the carrier tolerability, the vesicle localization within the cells and the amount of BDP actually internalized by the cells.

Altri partecipanti alla ricerca

Franco Alhaique SSD : CHIM/09 - Farmaceutico tecnologico applicativo

Maria Carafa SSD : CHIM/09 - Farmaceutico tecnologico applicativo

Brevetti

2010: Niosomi, polvere liofilizzata di essi e loro uso in terapia. RM2010A000002.

2011: Niosomes, lyophilized powder thereof and their uses in therapy. WO 2011/083428 A1 international publication date 14 July 2011

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF CONTROLLED RELEASE

Titolo : Non-ionic surfactant vesicles in pulmonary glucocorticoid delivery: Characterization and interaction with human lung fibroblasts

Autore/i : MARIANECCI C. and D. PAOLINO and C. CELIA and M. FRESTA and M. CARAFA and F. ALHAIQUE

Anno : 2010

Numero volume : 147,

Pagine da - a : 127--135

Issn : 0168-3659

Doi : 10.1016/j.jconrel.2010.06.022

MACROAREA : A

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NMR and foodstuffs: the case of olive olis

La Risonanza Magnetica nello Studio degli Alimenti: il caso degli oli di oliva

Nuclear Magnetic Resonance (NMR) spectroscopy is one of the most useful methodologies used in metabolomic and nutraceutical studies. In the same experiment, it is possible to determine the quantitative and qualitative metabolic profile of foodstuffs without performing particular sample pre-treatment. This methodology has shown to be a valuable tool for the qualitative and quantitative analysis of olive oils, sea bass, truffles, lettuce, tomatoes etc. Here, we report in more detail the results obtained from recent studies on olive oils.

The NMR spectroscopy allows olive oils to be characterized in terms of geographical origin, genetical origin, authenticity and quality. Using high field proton NMR spectroscopy it is possible to determine, not only the components present in a major amount i.e. fatty acid chains but also some minor components such as aldehydes, sterols, terpenes and squalene. The NMR protocol provides the selection of some signals present in the 1H NMR spectrum, the measure of the signal intensity and the statistical elaboration of the intensity. In this way:1) it has been developed an NMR and chemometric analytical approach to classify extra virgin olive oils according to their geographical origin (in particular to discriminate between Ligurian and non-Ligurian olive oils) and according the different harvesting methods; 2) it has been developed a 1H NMR analytical protocol for the detection of refined hazelnut oils in admixtures with refined olive oils.

Partner della ricerca

Donatella Capitani

Anatoly P. Sobolev

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Agricultural and Food Chemistry

Titolo : Influence of Harvest Method and Period on Olive Oil Composition: an NMR and Statistical Study

Autore/i : M. D' Imperio,M. Gobbino, A. Picanza, S. Costanzo, A. Della Corte, L. Mannina

Nome rivista o titolo libro o atti conferenza : Journal of Agricultural and Food Chemistry
Anno : 2010
Numero volume : 58
Pagine da - a : 11043?11051
Doi : 10.1021/jf1026982
Nome rivista o titolo libro o atti conferenza : Journal of Agriculture and Food Chemistry
Titolo : 1H NMR-Based protocol for the detection of adulterations of refined olive oils with refined hazelnut oil
Autore/i : L. Mannina, M. D¿Imperio, D. Capitani, S. Rezzi, C. Guillou, T. Mavromoustakos, M.D. Molero Vilchez, A.H. Fernández, F. Thomas, R. Aparicio
Anno : 2009
Numero volume : 57
Pagine da - a : 11550-11556
Doi : 10.1021/jf902426b
Nome rivista o titolo libro o atti conferenza : Talanta
Titolo : NMR and chemometrics in tracing European olive oils: the case study of Ligurian samples
Autore/i : L. Mannina F. Marini, M. Gobbino, A.P. Sobolev, D. Capitani
Anno : 2010
Numero volume : 80
Pagine da - a : 2141-2148

MACROAREA : A

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Gas-Phase studies of C-H bond activation of hydrocarbons.

Processi di attivazione e funzionalizzazione di idrocarburi in fase gassosa.

Altri partecipanti alla ricerca

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Scuola Normale Superiore di Pisa
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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHYSICAL CHEMISTRY CHEMICAL PHYSICS
Titolo : Water activation by SO2.+ ions: an effective source of OH. radicals
Autore/i : DE PETRIS G. and A. CARTONI and A. TROIANI and G. ANGELINI and O. URSINI
Anno : 2009
Numero volume : 11,
Pagine da - a : 9976--9978
Issn : 1463-9076
Doi : 10.1039/b915123k
Nome rivista o titolo libro o atti conferenza : CHEMISTRY-A EUROPEAN JOURNAL
Titolo : Methane Activation by Metal-Free Radical Cations: Experimental Insight into the Reaction Intermediate
Autore/i : DE PETRIS G. and A. TROIANI and M. ROSI and G. ANGELINI and O. URSINI
Anno : 2009

Nome rivista o titolo libro o atti conferenza : PHYSICAL CHEMISTRY CHEMICAL PHYSICS
Numero volume : 15,
Pagine da - a : 4248--4252
Issn : 0947-6539
Doi : 10.1002/chem.200802581
Nome rivista o titolo libro o atti conferenza : CHEMISTRY-A EUROPEAN JOURNAL
Titolo : Double CH Activation of Ethane by Metal-Free SO2.+ Radical Cations
Autore/i : DE PETRIS G. and A. CARTONI and A. TROIANI and V. BARONE and P. CIMINO and G. ANGELINI and O. URSINI
Anno : 2010
Numero volume : 16,
Pagine da - a : 6234--6242
Issn : 0947-6539
Doi : 10.1002/chem.200903588

MACROAREA : A

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Minimalistic Models of Reactivity and Mechanism of Heme-oxygenase Enzymes

Modelli minimali di reattività e meccanismo di enzimi eme-ossigenasi

Among biomimetic oxidants developed to disclose the mechanistic routes operative in several metal catalyzed biological and industrial processes, high-valent transition metal-oxo species are investigated for their role as competent intermediates in mono-oxygenases biochemistry.
We have obtained functional models of the Compound I, namely [(TPFPP)¿+FeIV=O]+, [(TPFPP)MnV=O]+ and [(TPFPP)CrV=O]+ (TPFPP=meso-tetrakis (pentafluorophenyl)porphyrinato dianion), as bare species by electrospray ionization from solutions of appropriate precursors and have investigated their reactivity in the gas phase by Fourier transform ion cyclotron resonance (FT-ICR) mass spectrometry. The long lifetime ensured by the dilute environment allows to reveal both structural details and elementary steps of the catalytic activity of these active species. The oxidation ability of these ultimate catalytic intermediates towards a range of different substrates, including olefins, amines, sulfides, phosphites and nitrogen oxides, has been obtained by the direct determination of reaction patterns and thermal rate constants. The reaction pathways are initiated by electron transfer and yield products reflecting delivery of oxygen and hydrogen atom, besides hydride and electron transfer processes.

Altri partecipanti alla ricerca

Simonetta Fornarini	SSD : CHIM/03 - Chimica generale e inorganica
Barbara Chiavarino	SSD : CHIM/03 - Chimica generale e inorganica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of the American Chemical Society
Titolo : Probing 'Spin-Forbidden' Oxygen-Atom Transfer: Gas-Phase Reactions of Chromium-Porphyrin Complexes
Autore/i : Crestoni, Maria Elisa; Fornarini, Simonetta; Lanucara, Francesco; Warren, Jeffrey J.; Mayer, James M.
Anno : 2010
Numero volume : 132
Pagine da - a : 4336-4343
Issn : 0002-7863
Doi : http://dx.doi.org/10.1021/ja9103638

Nome rivista o titolo libro o atti conferenza : Journal of the American Chemical Society
Nome rivista o titolo libro o atti conferenza : Chemistry, European Journal
Titolo : Oxygen-Atom Transfer by a Naked Manganese(V)¿Oxo¿Porphyrin Complex Reveals Axial Ligand Effect
Autore/i : Maria Elisa Crestoni, Simonetta Fornarini, Francesco Lanucara
Anno : 2009
Numero volume : 15
Pagine da - a : 7863-7866
Issn : 0947-6539
Doi : http://dx.doi.org/10.1002/chem.200901361
Nome rivista o titolo libro o atti conferenza : Journal of the American Chemical Society
Titolo : Probing the Compound I-like Reactivity of a Bare High-Valent Oxo Iron Porphyrin Complex: the Oxidation of Tertiary Amines
Autore/i : Barbara Chiavarino, Romano Cipollini, Maria Elisa Crestoni, Simonetta Fornarini, Francesco Lanucara, Andrea Lapi
Anno : 2008
Numero volume : 130
Pagine da - a : 3208-3217
Issn : 0002-7863
Doi : http://dx.doi.org/10.1021/ja077286t

MACROAREA : A

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pH-sensitive nanocarriers for drug targeting

Nanovettori pH-sensibili per il targeting di farmaci

pH-sensitive nanocarriers for drug delivery to pathological tissues, which acidic environment as compared to normal tissues, will be of great interest for pharmaceutical applications (e.g. targeting tumor or inflamed tissues).
To couple the versatility of surfactant nanocarriers with pH-sensitivity we developed different approaches:
- addition of cholesteryl hemisuccinate (CHEMS), a pH-reactive molecule, to Tween20/cholesterol niosomes;
- synthesis of a novel class of compounds based on Tween20 surfactant bearing different pH-sensitive head groups (glycine, N-methyl-glycine, N,N-dimethyl-glycine);
- evaluation of pH-sensitivity of vesicles from Tween21.
In summary:
- Tween20/cholesterol/CHEMS vesicles are stable and pH-sensitive: pH-sensitivity is higher than that obtained with pH-sensitive liposomes and their uptake mechanism, after incubation with macrophage-like cells, is comparable with liposomes (clathrin-mediated endocytosis).
- Novel Tween20 derivatives-based vesicles are pH-sensitive after a simple functionalization of the surfactant and are able to interact efficiently with hepatoblastoma cells.
- Tween21 vesicles show dimensions compatible with the transport across biological barriers (100 nm) and are pH-sensitive, without addition of pH-reactive molecules.

Altri partecipanti alla ricerca

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Gene Expression¿Microarrays Laboratory, IRCCS-Children¿s Hospital Bambino Gesù, P.za S. Onofrio 4, 00165 Rome, Italy

Brevetti

Niosomes, freeze-dried powder thereof and their use in treatment

WO/2011/083428

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : COLLOIDS AND SURFACES B-BIOINTERFACES

Titolo : Novel pH-sensitive non-ionic surfactant vesicles: comparison between Tween 21 and Tween 20

Autore/i : LUISA DI MARZIO and CARLOTTA MARIANECCI and MARIADEA PETRONE and FEDERICA RINALDI and CARAFA M.

Anno : 2011

Numero volume : 82(1)

Pagine da - a : 18--24

Issn : 0927-7765

Doi : 10.1016/j.colsurfb.2010.08.004

Nome rivista o titolo libro o atti conferenza : BIOORGANIC & MEDICINAL CHEMISTRY LETTERS

Titolo : Novel Tween??20 derivatives enable the formation of efficient pH-sensitive drug delivery vehicles for human hepatoblastoma

Autore/i : ANDREA MASOTTI and PAOLA VICENNATI and ANNA ALISI and CARLOTTA MARIANECCI and FEDERICA RINALDI and CARAFA M. and GIANCARLO ORTAGGI

Anno : 2010

Numero volume : 20,

Pagine da - a : 3021--3025

Issn : 0960-894X

Doi : 10.1016/j.bmcl.2010.04.010

Nome rivista o titolo libro o atti conferenza : BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES

Titolo : pH-sensitive non-phospholipid vesicle and macrophage-like cells: Binding, uptake and endocytotic pathway.

Autore/i : DI MARZIO L and MARIANECCI C and CINQUE B and NAZZARRI M and CIMINI AM and CRISTIANO L and CIFONE MG and ALHAIQUE F and CARAFA M.

Anno : 2008

Numero volume : 1778,

Pagine da - a : 2749--2756

Issn : 0005-2736

Doi : 10.1016/j.bbamem.2008.07.029

MACROAREA : A

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Optical technologies for quantum information processing

Tecnologie ottiche per l'informazione quantistica

Quantum information is a new scientific field with origins in the early 90s, introduced by the merging of classical information and quantum physics. Photons are a natural candidate for quantum information transmission, quantum computing, optical quantum sensing, and metrology. In the last few years, the Quantum Optics group of Roma has contributed to develop different experimental photonic platforms to carry out quantum information processing based on different photon degrees of freedom. We developed new photonic integrated technologies to manipulate quantum states of light which has lead to one patent and several publications.
Only in 2011 the Principal Investigator has been invited to about 15 international conferences to present these results.
Highlights:
- New & Views article in Nature, "Quantum photonics: Entangled photons on a chip", M. Lobino, J. O'Brien, Nature 469, 43 (2011). Highlight on article L. Sansoni, et al., Phys.Rev.Lett. 105, 200503 (2010).
- New & Views article in Nature Photonics, "The quest for higher dimensionality", S., S. Kulik, Nature Photonics 4, 585 (2010). Highlight on article E. Nagali et al., Physical Review A 81, 052317 (2010) .
- Highlight with a Synopsis on the Physics on article L. Sansoni, et al., Phys.Rev.Lett. 105, 200503 (2010).

Altri partecipanti alla ricerca

Paolo Mataloni		SSD : FIS/03 - Fisica della materia
Eleonora Nagali	Under 40	SSD : FIS/03 - Fisica della materia
Chiara Vitelli	Under 40	SSD : FIS/03 - Fisica della materia
Andrea Chiuri	Under 40	SSD : FIS/03 - Fisica della materia
Nicolò Spagnolo	Under 40	SSD : FIS/03 - Fisica della materia
Linda Sansoni	Under 40	SSD : FIS/03 - Fisica della materia

Partner della ricerca

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Brevetti

Dispositivi ottici integrati per manipolare la polarizzazione della luce ed applicazioni nell'ambito dell'informazione quantistica.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Physical Review Letters
Titolo : Polarization entangled state measurement on a chip
Autore/i : L. Sansoni, F. Sciarrino, G. Vallone, P. Mataloni, A. Crespi, R. Ramponi, R. Osellame
Anno : 2010
Numero volume : 105
Pagine da - a : 200503
Isbn : 0031-9007
Doi : 10.1103/PhysRevLett.105.200503
Nome rivista o titolo libro o atti conferenza : Nature Photonics
Titolo : Optimal quantum cloning of orbital angular momentum photon qubits through Hong-Ou-Mandel coalescence
Autore/i : E. Nagali, L. Sansoni, F. Sciarrino, F. De Martini, L. Marrucci, B. Piccirillo, E. Karimi, E. Santamato
Anno : 2009
Numero volume : 3
Pagine da - a : 720
Doi : 10.1038/nphoton.2009.214

Nome rivista o titolo libro o atti conferenza : Physical Review Letters
Nome rivista o titolo libro o atti conferenza : Physical Review Letters
Titolo : Experimental Optimal Cloning of Four-Dimensional Quantum States of Photons
Autore/i : E. Nagali, D. Giovannini, L. Marrucci, S. Slussarenko, E. Santamato, and F. Sciarrino
Anno : 2010
Numero volume : 105
Pagine da - a : 073602
Doi : 10.1103/PhysRevLett.105.073602

MACROAREA : A

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Dipartimento : Fisica

Fabrication of site-, shape- and composition-controlled semiconductor nanostructures by a defect-engineering approach

Fabbricazione di nanostrutture semiconduttrici a controllo posizionale, morfologico e composizionale tramite un approccio di ingegneria di difetto

Control over size, density and positioning of semiconductor nanostructures is desirable in most devices. This control cannot be attained by ?bottom-up? methods relying on random self-assembly. Conversely, a high number of processing and re-growth steps are typical drawbacks of ?top-down? approaches.
We developed a novel nanotechnology approach based on the hydrogen-induced passivation of N atoms in Ga(AsN), a material of interest for telecommunications and photovoltaics. Indeed by allowing H incorporation in selected regions of the sample, it is possible to attain a spatially tailored modulation of the material electronic and structural properties. Here, we report the realization of site-, shape- and composition-controlled Ga(AsN)/GaAs quantum dots. Size uniformity and exact positioning of the dots are warranted by lithographic patterning of the sample surface by nanometer-sized metallic masks that impede hydrogen diffusion in defined regions of the crystal. Marked zero-dimensional electronic characteristics are observed by means of single-dot spectroscopy also in the presence of high magnetic field. These ?proof-of-principle? experiments represent a first step toward the realization of nanostructures that can be easily shaped and precisely integrated into photonics structures.

Altri partecipanti alla ricerca

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Partner della ricerca

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Alex zunger, National Renewable Energy Laboratory, Golden (Colorado), USA
Michael Stavola, Department of Physics, Lehigh University, Bethlehem (Pennsylvania), USA
Jaan Kees Maan, High Field Magnet Laboratory, Institute for Molecules and Materials, Radboud University, Nijmegen, The Netherlands
Eoin P. O'Reilly, Tyndall National Institute, Cork, Ireland
V. Lebedev, Fraunhofer Inst Appl Solid State Phys, D-79108 Freiburg, Germany
Massimo Bersani, Fondazione Bruno Kessler-IRST, Trento (Italy)
Marina Berti, Dipartimento di Fisica, Universita' di Padova, Italy
Faustino Martelli, TASC-INFM CNR, Trieste, Italy
Annamaria Gerardino, IFN-CNR, Roma, Italy Ente Esterno Mario Geddo, Dipartimento di Fisica A. Volta, Universita' di

Thomas Tiedjie Department of Physics and Astronomy, University of British Columbia, Vancouver British Columbia (Canada)
Pavia, Italy

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Applied Physics Letters
Titolo : Light polarization control in strain-engineered GaAsN/GaAsN:H heterostructures¿
Applied Physics Letters 261905 (2009)
Autore/i : R. Trotta, A. Polimeni, M. Capizzi, F. Martelli, S. Rubini, M. Francardi, A. Gerardino, and L. Mariucci
Anno : 2009
Numero volume : 94
Pagine da - a : 261905 1-3
Doi : 10.1063/1.3157838
Nome rivista o titolo libro o atti conferenza : Advanced Materials
Titolo : Fabrication of Site-Controlled Quantum Dots by Spatially Selective Incorporation of Hydrogen in Ga(AsN)/GaAs Heterostructures
Autore/i : R. Trotta, A. Polimeni, F. Martelli, G. Pettinari, M. Capizzi, L. Felisari, S. Rubini, M. Francardi, A. Gerardino, P. C. M. Christianen and J. C. Maan
Anno : 2011
Numero volume : 23
Pagine da - a : 2706-2710
Doi : 10.1002/adma.201004703
Nome rivista o titolo libro o atti conferenza : Applied Physics Letters
Titolo : Laser writing of the electronic activity of N- and H-atoms in GaAs
Autore/i : N. Balakrishnan , O. Makarovsky , A. Polimeni, A. Polimeni , M. Capizzi , F. Martelli, and S. Rubini
Anno : 2011
Numero volume : 99
Pagine da - a : 021105 1-3
Doi : 10.1063/1.3610464

MACROAREA : A
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Precision cosmology with the PLanck-HFI space telescope
Cosmologia di precisione con il telescopio spaziale Planck-HFI
Planck is an European space mission carrying a 1.5 meter telescope and two instruments. The Low Frequency Instrument and the High Frequency Instrument (HFI). The mission is devoted to the measurement of the full sky in the microwave band, between 30 and 850 GHz.
This research is aimed at the use of Planck, and in particular the HFI, for cosmology. In the range of frequencies observed by Planck peaks the signal of the Cosmic Microwave Background (CMB) radiation. The CMB carries an image of the Early Universe imprinted as thermal fluctuations. More information about the evolution and the constituents of the Universe are encoded in the polarization of the CMB.
In the last years Planck has been built and prepared for observations. In May 2009 has been launched and operations are currently going on.

The use of Planck for accurate cosmological studies requires a very high level of knowledge of the instrumental performances. The cosmological information is given by tiny fluctuations in the temperature and polarization of the CMB and even small uncertainties in the instrumental parameters can propagate into large uncertainties in the cosmology. The carried research consisted in the calibration of the HFI instrument on ground, in flight, and by means of ground based observations.

Altri partecipanti alla ricerca

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Silvia Masi	SSD : FIS/05 - Astronomia e astrofisica

Partner della ricerca

ESA European Space Agency
Institut d'astrophysique spatiale, Orsay - Paris (France)
Laboratoire d'Etude du Rayonnement et de la Matière en Astrophysique, Paris (France),
California Institute of Technology (CalTech), Pasadena, California (USA)
Institut d'astrophysique de Paris (IAP), Paris (France)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Astronomy & Astrophysics
Titolo : Planck early results, first assessment of the High Frequency Instrument in-flight performance.
Autore/i : PLANCK HFI CORE TEAM; ADE P. A. R; AGHANIM N; ANSARI R; ARNAUD M; ASHDOWN M; AUMONT J; BANDAY A. J; BARTELMANN M; BARTLETT J. G; BATTANER E; BENABED K; BENOT A; BERNARD J. -P; BERSANELLI M; BHATIA R; BOCK J. J; BOND J. R; BORRILL J; BOUCHET F. R; BOULANGER F; BRADSHAW T; BRELLE E; BUCHER M; CAMUS P; CARDOSO J. -F; CATALANO A; CHALLINOR A; CHAMBALLU A; CHARRA J; CHARRA M; CHARY R. -R; CHIANG C; CHURCH S; CLEMENTS D. L; COLOMBI S; COUCHOT F; COULAIS A; CRESSIOT C; CRILL B. P; CROOK M; DE BERNARDIS P; DELABROUILLE J; DELOUIS J. -M; DÉSERT F. -X; DOLAG K; DOLE H; DORÉ O; DOUSPIS M; EFSTATHIOU G; ENG P; FILLIARD C; FORNI O; FOSALBA P; FOURMOND J. -J; GANGA K; GIARD M; GIRARD D; GIRAUD-HÉRAUD Y; GISPERT R; GORSKI K. M; GRATTON S; GRIFFIN M; GUYOT G; HAISSINSKI J; HARRISON D; HELOU G; HENROT-VERSILLÉ S; HERNANDEZ-MONTEAGUDO C; HILDEBRANDT S. R; HILLS R; HIVON E; HOBSON M; HOLMES W. A; HUENBERGER K. M; JAE A. H; JONES W. C; KAPLAN J; KNEISSL R; KNOX L; LAGACHE G; LAMARRE J. -M; LAMI P; LANGE A. E; LASENBY A; LAVABRE A; LAWRENCE C. R; LERICHE B; LEROY C; MACAS-PEREZ Y. LONGVAL J. F; MACIASZEK T; MACTAVISH C. J; MAEI B; MANDOLESI N; MANN R; MANSOUX B; MASI S; MATSUMURA T; MCGEHEE P; MELIN J. -B; MERCIER C; MIVILLE-DESCHNES M. -A; MONETI A; MONTIER L; MORTLOCK D; MURPHY A; NATI F; NETTERELD C. B; NORGAARD-NIELSEN H. U; NORTH C; NOVIELLO F; NOVIKOV D; OSBORNE S; PAINE C; PAJOT F; PATANCHON G; PEACOCKE T; PEARSON T. J; PERDEREAU O; PEROTTO L; F. PIACENTINI; PIAT M; PLASZCZYNSKI S; POINTECOUTEAU E; PONS R; PONTHIEU N; PREZEAU G; PRUNET S; PUGET J. -L; REACH W. T; RENAULT C; RISTORCELLI I; ROCHA G; ROSSET C; ROUDIER G; ROWAN-ROBINSON M; RUSHOLME B; SANTOS D; SAVINI G; SCHAEFER B. M; SHELLARD P; SPENCER L; STARCK J. -L; STASSI P; STOLYAROV V; STOMPOR R; SUDIWALA R; SUNYAEV R; SYGNET J. -F; TAUBER J. A; THUM C; TORRE J. -P; TOUZE F; TRISTRAM M; VAN LEEUWEN F; VIBERT L; VIBERT D; WADE L. A; WANDELT B. D; WHITE S. D. M; WIESEMEYER H; WOODCRAFT A; YURCHENKO V; YVON D; ZACCHEI A
Anno : 2011
Numero volume : In stampa
Nome rivista o titolo libro o atti conferenza : ASTRONOMY & ASTROPHYSICS
Titolo : Measurement of the Crab nebula polarization at 90 GHz as a calibrator for CMB experiments.

Nome rivista o titolo libro o atti conferenza : Astronomy & Astrophysics
Autore/i : J. AUMONT; L. CONVERSI; C. THUM; H. WIESEMEYER; E. FALGARONE; J. F. MACÍAS-PÉREZ; F. PIACENTINI; E. POINTECOUTEAU; N. PONTHIEU; J. L. PUGET; C. ROSSET; J. A. TAUBER AND M. TRISTRAM
Anno : 2010
Numero volume : 514
Pagine da - a : A70
Doi : 10.1051/0004-6361/200913834
Nome rivista o titolo libro o atti conferenza : Astronomy & Astrophysics
Titolo : Planck pre-launch status: High Frequency Instrument polarization calibration
Autore/i : Rosset, C.; Tristram, M.; Ponthieu, N.; Ade, P.; Aumont, J.; Catalano, A.; Conversi, L.; Couchot, F.; Crill, B. P.; Désert, F.-X.; Ganga, K.; Giard, M.; Giraud-Héraud, Y.; Haïssinski, J.; Henrot-Versillé, S.; Holmes, W.; Jones, W. C.; Lamarre, J.-M.; Lange, A.; Leroy, C.; Macías-Pérez, J.; Maffei, B.; de Marcillac, P.; Miville-Deschênes, M.-A.; Montier, L.; Noviello, F.; Pajot, F.; Perdereau, O.; Piacentini, F.; Piat, M.; Plaszczynski, S.; Pointecouteau, E.; Puget, J.-L.; Ristorcelli, I.; Savini, G.; Sudiwala, R.; Veneziani, M.; Yvon, D.
Anno : 2010
Numero volume : 520
Pagine da - a : A13
Doi : 10.1051/0004-6361/200913054

MACROAREA : A

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Study of proton-proton collisions with the CMS experiment at LHC

Studio delle collisioni protone-protone a LHC con l'esperimento CMS

The CMS experiment at LHC aims at studying proton-proton collisions at a center-of-mass energy of 7 TeV.
The CMS detector is equipped with a silicon tracker, a scintillating crystal electromagnetic calorimeter and a hadron calorimeter, inside the large bore of a superconducting solenoid providing an axial magnetic field of 3.8 T. Muon detectors are interspersed within the steel return yoke of the magnet, outside it. A two stage online trigger system selects interesting events reducing the data acquisition rate from 40 MHz to about 300 Hz. This result in about 5 PB/year of data, that are distributed to several centres around the world (Tier-1) from which they are further distributed to Tier-2 regional centres, one of which is located in our Department. The aggregated computing power of all the centres is exploited by physicists submitting their analysis job by virtue of Grid technologies.
Since its start, CMS produced about 100 scientific papers about the properties of fundamental interactions. Our group is mainly focused on the search for the Higgs boson, search for new physics looking for exotic signatures as well as on the maintenance of the detector and on the running of the Roma Tier-2 center.

Altri partecipanti alla ricerca

Luciano Maria Barone		SSD : FIS/01 - Fisica sperimentale
Shahram Rahatlou	Under 40	SSD : FIS/01 - Fisica sperimentale
Daniele Del Re	Under 40	SSD : FIS/01 - Fisica sperimentale
Egidio Longo		SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Istituto Nazionale di Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Phys.Lett. B

Titolo : Search for Supersymmetry in pp Collisions at 7 TeV in Events with Jets and Missing Transverse Energy.

Autore/i : CMS Collaboration

Anno : 2011

Numero volume : 698

Pagine da - a : 196-218

Doi : doi:10.1016/j.physletb.2011.03.021

Nome rivista o titolo libro o atti conferenza : Phys.Rev.Lett.

Titolo : Transverse-momentum and pseudorapidity distributions of charged hadrons in pp collisions at sqrt(s) = 7 TeV.

Autore/i : CMS Collaboration

Anno : 2010

Numero volume : 105

Pagine da - a : 022002

Doi : doi:10.1103/PhysRevLett.105.022002

Nome rivista o titolo libro o atti conferenza : JHEP

Titolo : Transverse momentum and pseudorapidity distributions of charged hadrons in pp collisions at (√s) = 0.9 and 2.36 TeV.

Autore/i : CMS Collaboration

Anno : 2010

Numero volume : 1002

Pagine da - a : 041

Doi : DOI: 10.1007/JHEP02(2010)041

MACROAREA : A

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Dipartimento : Fisica

Quantum nature of the Cosmological Singularity

Natura quantistica della Singolarità Cosmologica

The research line on Quantum Gravity dealt with the quantization of the gravitational field in a generic local Lorentz frame. This investigation was motivated by the gauge fixing of the local Lorentz frame performed in Loop Quantum Gravity (LQG). The Hamiltonian formulation without such a gauge fixing has been developed. Non-dynamical boost parameters and SU(2) connections were selected out as privileged variables. This analysis outlined the invariant nature of the discrete structure proper of LQG and the fundamental role played by SU(2) symmetry in gravity phase-space. Revising recent issues in preserving SU(2) symmetry when quantizing the isotropic Universe, we traced a new perspective in approaching the cosmological problem within quantum geometry. It was outlined how a polymer-like scale for quantum cosmology can be predicted from a proper fundamental graph underlying the homogeneous and isotropic continuous picture. However, such a minimum scale did not coincide with the choice made in Loop Quantum Cosmology, thus the fate of the initial singularity and the existence of a viable bouncing scenario are still open issues.
The perspectives of this approach are related with the definition of a consistent cosmological quantum model based on the proposed graph structure.

Altri partecipanti alla ricerca

Francesco Cianfrani SSD : FIS/02 - Fisica teorica, modelli e metodi matematici

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Physical Review Letters

Titolo : Towards Loop Quantum Gravity without the Time Gauge

Autore/i : F. Cianfrani and G. Giovanni

Anno : 2009

Numero volume : 102

Pagine da - a : 091301

Doi : 10.1103/PhysRevLett.102.091301

Nome rivista o titolo libro o atti conferenza : Physical Review D

Titolo : Shortcomings of the big bounce derivation in loop quantum cosmology

Autore/i : F. Cianfrani and G. Montani

Anno : 2010

Numero volume : 82

Pagine da - a : 021501

Doi : 10.1103/PhysRevD.82.021501

Nome rivista o titolo libro o atti conferenza : Physical Review D

Titolo : Semiclassical isotropization of the Universe during a de Sitter phase

Autore/i : F. Cianfrani, G. Montani and M. Muccino

Anno : 2010

Numero volume : 82

Pagine da - a : 103524

Doi : 10.1103/PhysRevD.82.103524

MACROAREA : A

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Experiments on Foundations of Quantum Mechanics

Esperimenti sui fondamenti della meccanica quantistica

Einstein, Podolsky, and Rosen (EPR) showed that quantum mechanics cannot be simultaneously local, real, and complete, and were convinced that quantum theoryshould satisfy the reasonable assumption of locality and reality. In 1964, Bell introduced his famous inequality ruling out the possibility to verify EPR argument. The huge amount of experimental data obtained so far by Bells nonlocality tests, in particular with photons, confirms the quantum mechanical predictions and leads to the common belief that quantum mechanics cannot be simultaneously local and real. Indeed Bell's inequality is nowadays exploited as a tool to detect entanglement in quantum cryptography and in quantum computation. In recent years we have carried several theoretical and experimental works which demonstrated the importance of multiqubit photon states to operate in a high-dimensional Hilbert space. By entangling different degrees of freedom of two particles, fundamental test of quantum mechanics and innovative quantum information protocols have been realized. Recently we created a six-qubit cluster state and demonstrated genuine six-qubit entanglement, persistency of entanglement against the loss of qubits, and higher violation than in previous experiments on Bell inequalities of the Mermin type.

Altri partecipanti alla ricerca

Fabio Sciarrino	Under 40	SSD : FIS/03 - Fisica della materia
Nicolò Spagnolo	Under 40	SSD : FIS/03 - Fisica della materia

Fabio Sciarrino	Under 40	SSD : FIS/03 - Fisica della materia
Linda Sansoni	Under 40	SSD : FIS/03 - Fisica della materia
Chiara Vitelli	Under 40	SSD : FIS/03 - Fisica della materia
Eleonora Nagali	Under 40	SSD : FIS/03 - Fisica della materia
Andrea Chiuri	Under 40	SSD : FIS/03 - Fisica della materia

Partner della ricerca

University of Sevilla

Università di Pavia

Università di Firenze

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Physical Review Letters

Titolo : Realization and characterization of a 2-photon 4-qubit linear cluster state

Autore/i : G. Vallone, E. Pomarico, P. Mataloni, F. De Martini, V. Berardi

Anno : 2007

Numero volume : 98

Pagine da - a : 180502

Doi : 10.1103/PhysRevLett.98.180502

Nome rivista o titolo libro o atti conferenza : Physical Review Letters

Titolo : Hyperentangled mixed phased Dicke states: optical design and detection

Autore/i : A. Chiuri, G. Vallone, N. Bruno, C. Macchiavello, D. Bruß, P. Mataloni

Anno : 2010

Numero volume : 105

Pagine da - a : 250501

Doi : 10.1103/PhysRevLett.105.250501

Nome rivista o titolo libro o atti conferenza : Physical Review Letters

Titolo : Multipath entanglement of two photons

Autore/i : A. Rossi, G. Vallone, A. Chiuri, F. De Martini, P. Mataloni

Anno : 2009

Numero volume : 102

Pagine da - a : 153902

Doi : 10.1103/PhysRevLett.102.153902

MACROAREA : A

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Dipartimento : Fisica

Astrophyiscal measurements from the stratosphere

Misure astrofisiche dalla stratosfera

Stratospheric balloons offer a cheap, fast and effective way to carry out astrophysics measurements uncorrupted from our turbulent, opaque and emissive atmosphere. Millimeter waves and far-infrared are strongly attenuated by the atmosphere. For this reason we have developed several telescopes operating at 40 km of altitude as stratospheric balloon payloads. The very successful BOOMERanG experiment has measured the anisotropy and the polarization of the Cosmic Microwave Background using circumantarcitc flights (see attached papers). After BOOMERanG, we have developed a larger balloon telescope, called OLIMPO and devoted to the measurement of the Sunyaev-Zeldovich effect

in clusters of galaxies. The instrument features 4 arrays of bolometric detectors and a differential Fourier transform spectrometer, to measure more than 70 independent frequencies simultaneously. This is the key to separate the genuine inverse Compton effect (produced on CMB photons by the hot plasma in the clusters) from local effects like foreground dust emission or intrinsic CMB anisotropy. The instrument has been completed and is ready to be launched from the Svalbard islands in the coming year. Meanwhile we have also demonstrated the possibility to use the Svalbard site for flights in the polar night

Altri partecipanti alla ricerca

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Paolo de Bernardis		SSD : FIS/05 - Astronomia e astrofisica
Luca Lamagna	Under 40	SSD : FIS/05 - Astronomia e astrofisica
Elia Battistelli	Under 40	SSD : FIS/05 - Astronomia e astrofisica

Partner della ricerca

CEA Saclay (Dminique Yvon)
Istituto Nazionale di Geofisica (Giovanni Romeo)
Institut Neele Grenoble (P. Camus)
School of Physics and Astronomy University of Cardiff (P. Mauskopf)
Aerosekur

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ASTRONOMY & ASTROPHYSICS
Titolo : Extracting cosmological signals from foregrounds in deep mm maps of the sky
Autore/i : L. CONVERSI and P. FIADINO and DE BERNARDIS P. and S. MASI
Anno : 2010
Numero volume : 524,
Pagine da - a : A7--1--A7--10
Issn : 0004-6361
Doi : 10.1051/0004-6361/200912838
Nome rivista o titolo libro o atti conferenza : ASTRONOMY & ASTROPHYSICS
Titolo : On the effect of cosmic rays in bolometric CMB measurements
Autore/i : S. MASI and E. BATTISTELLI and DE BERNARDIS P. and L. LAMAGNA and F. NATI and L. NATI and P. NATOLI and G. POLENTA and A. SCHILLACI
Anno : 2010
Numero volume : 519,
Pagine da - a : A24
Issn : 0004-6361
Doi : 10.1051/0004-6361/201014065
Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL LETTERS
Titolo : Subdegree Sunyaev-Zel'dovich Signal from Multifrequency BOOMERanG observations
Autore/i : M. VENEZIANI and A. AMBLARD and A. COORAY and F. PIACENTINI and D. PIETROBON and P. SERRA and P. A. R. ADE and J. J. BOCK and J. R. BOND and J. BORRILL and A. BOSCALERI and P. CABELLA and C. R. CONTALDI and B. P. CRILL and DE BERNARDIS P. and G. DE GASPERIS and A. DE OLIVEIRA-COSTA and G. DE TROIA and G. DI STEFANO and K. M. GANGA and E. HIVON and W. C. JONES and T. S. KISNER and A. E. LANGE and C. J. MACTAVISH and S. MASI and P. D. MAUSKOPF and A. MELCHIORRI and T. E. MONTROY and P. NATOLI and C. B. NETTERFIELD and E. PASCALE and G. POLENTA and S. RICCIARDI and G. ROMEO and J. E. RUHL and P. SANTINI and M. TEGMARK and N. VITTORIO

Nome rivista o titolo libro o atti conferenza : ASTRONOMY & ASTROPHYSICS
Anno : 2009
Numero volume : 702,
Pagine da - a : 61--65
Issn : 2041-8205
Doi : 10.1088/0004-637X/702/1/L61

MACROAREA : A

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Dipartimento : Fisica

Higgs Boson search with the CDF experiment at Tevatron and ATLAS experiment at LHC

Ricerca del bosone di Higgs con gli esperimenti CDF al Tevatron e ATLAS a LHC

Finding the last unobserved fundamental particle in the standard model (SM), the Higgs boson, is a major goal of particle physics, and the search for its existence is a central component of both the Fermilab's Tevatron accelerator, and of the LHC collider at CERN programs. Direct searches at the CERN LEP collider have set a limit on the Higgs boson mass of mH>114.4 GeV at the 95% C.L.. Combining this limit with precision electroweak measurements constrains the mass of the SM Higgs boson to be less than 186 GeV at the 95% C.L. The favored mass range therefore places the SM Higgs boson well within the reach of the experiments at the LHC and Tevatron colliders. Using larger data sample, and incorporate state of the art analysis techniques, CDF and ATLAS have reached sensitivities significantly exceeding those obtained in previous searches, allowing in the very near future to definitively clarify the electroweak symmetry breaking mechanism.

Altri partecipanti alla ricerca

Carlo Dionisi SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Istituto Nazionale Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CERN-PH-EP, arXiv:1106.2748, submitted to EPJC
Titolo : Limits on the production of the Standard Model Higgs Boson in pp collisions at sqrt(s) =7 TeV with the ATLAS detector
Autore/i : S.Giagu et Al. - ATLAS Collaboration
Anno : 2011
Numero volume : CERN-PH-EP-2011-076
Nome rivista o titolo libro o atti conferenza : Phys.Rev.Lett. 104, 221803 (2010).
Titolo : Inclusive Search for Standard Model Higgs Production in the WW Decay Channel Using the CDF II Detector
Autore/i : S.Giagu et Al. - CDF Collaboration
Anno : 2010
Numero volume : 104
Pagine da - a : 221803
Doi : 10.1103/PhysRevLett.104.061803
Nome rivista o titolo libro o atti conferenza : Phys. Rev. Lett.
Titolo : Improved Search for a Higgs Boson Produced in Association with Z → l+l- in proton antiproton Collisions at sqrt(s) = 1.96 TeV

Nome rivista o titolo libro o atti conferenza : CERN-PH-EP, arXiv:1106.2748, submitted to EPJC
Autore/i : S.Giagu et al. - CDF Collaboration
Anno : 2010
Numero volume : 105
Pagine da - a : 251802
Doi : 10.1103/PhysRevLett.105.251802

MACROAREA : A

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Study of the light scalar mesons in electron-positron collisions

Studio dei mesoni scalari leggeri in collisioni elettrone-positrone

The scalar mesons of mass below 1 GeV (sigma(600), f0(980), a0(980) and kappa(800)) are an enigma: it is still controversial whether they are ordinary qqbar mesons, or compact four quark states, or KKbar molecules.
The radiative decays phi(1020)->PP gamma, where P means pseudoscalar meson, are dominated by the exchange of a scalar meson in the intermediate state, thus they are suitable processes to study the f0(980) and the a0(980).
The KLOE experiment, carried out at the e+e- collider DAFNE of the Frascati Laboratories of the INFN, has collected data until March 2006.
With those data, we produced the most accurate measurements at present of the branching ratio of phi->f0gamma->pi0pi0gamma and pi+pi-gamma, and of phi->a0gamma->eta pi0gamma, and we also extracted the resonance parameters (masses and couplings) from the fit of the Dalitz plot or of the invariant mass of the two pseudoscalars in the final state.
A new KLOE data taking will start in October 2011 at DAFNE upgraded in luminosity, with an improved detector with electron taggers for gamma gamma physics.
The taggers will detect the off momentum e+/e- escaping the beam pipe, allowing to study the reaction gamma gamma->pi0pi0, which is the golden channel to look for the sigma(600), whose existence still needs confirmation.

Altri partecipanti alla ricerca

Antonio Di Domenico	SSD : FIS/01 - Fisica sperimentale
Cesare Bini	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Istituto Nazionale di Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHYSICS LETTERS. SECTION B
Titolo : Search for the decay phi -> K-0(K)over-bar(0)gamma with the KLOE experiment
Autore/i : AMBROSINO F and ANTONELLI A and ANTONELLI M and ARCHILLI F and BELTRAME P and BENCIVENNI G and BERTOLUCCI S and BINI C and BLOISE C and BOCCHETTA S and BOSSI F and BRANCHINI P and CAPON G and CAPUSSELA T and CERADINI F and CIAMBRONE P and DE LUCIA E and DE SANTIS A and DE SIMONE P and DE ZORZI G and DENIG A and DI DOMENICO A and DI DONATO C and DI MICCO B and DREUCCI M and FELICI G and FIORE S and FRANZINI P and GATTI C and GAUZZI P. and GIOVANNELLA S and GRAZIANI E and LANFRANCHI G and LEE-FRANZINI J and MARTINI M and MASSAROTTI P and MEOLA S and MISCETTI S and MOULSON M and MULLER S and MURTAS F and NAPOLITANO M and NGUYEN F and PALUTAN M and PASQUALUCCI E and PASSERI A and PATERA V and SANTANGELO P and SCIASCIA B and SPADARO T and

Nome rivista o titolo libro o atti conferenza : PHYSICS LETTERS. SECTION B
TESTA M and TORTORA L and VALENTE P and VENANZONI G and VERSACI R and XU G
Anno : 2009
Numero volume : 679,
Pagine da - a : 10--14
Issn : 0370-2693
Doi : 10.1016/j.physletb.2009.07.013
Nome rivista o titolo libro o atti conferenza : PHYSICS LETTERS. SECTION B
Titolo : Study of the a(0)(980) meson via the radiative decay phi -> eta pi(0)gamma with the KLOE detector
Autore/i : AMBROSINO F and ANTONELLI A and ANTONELLI M and ARCHILLI F and BACCI C and BELTRAME P and BENCIVENNI G and BERTOLUCCI S and BINI C and BLOISE C and BOCCHETTA S and BOSSI F and BRANCHINI P and CAMPANA P and CAPON G and CAPUSSELA T and CERADINI F and CHI S and CHIEFARI G and CIAMBRONE P and DE LUCIA E and DE SANTIS A and DE SIMONE P and DE ZORZI G and DENIG A and DI DOMENICO A and DI DONATO C and DI MICCO B and DORIA A and DREUCCI M and FELICI G and FERRARI A and FERRER ML and FIORE S and FORTI C and FRANZINI P and GATTI C and GAUZZI P. and GIOVANNELLA S and GORINI E and GRAZIANI E and KLUGE W and KULIKOV V and LACAVA F and LANFRANCHI G and LEE-FRANZINI J and LEONE D and MARTINI M and MASSAROTTI P and MEI W and MEOLA S and MISCETTI S and MOULSON M and MULLER S and MURTAS F and NAPOLITANO M and NGUYEN F and PALUTAN M and PASQUALUCCI E and PASSERI A and PATERA V and PERFETTO F and PRIMAVERA M and SANTANGELO P and SARACINO G and SCIASCIA B and SCIUBBA A and SIBIDANOV A and SPADARO T and TESTA M and TORTORA L and VALENTE P and VENANZONI G and VERSACI R and VOLPE R and XU G
Anno : 2009
Numero volume : 681,
Pagine da - a : 5--13
Issn : 0370-2693
Doi : 10.1016/j.physletb.2009.09.022
Nome rivista o titolo libro o atti conferenza : JOURNAL OF HIGH ENERGY PHYSICS
Titolo : Determination eta -> pi(+) pi(-) pi(0) Dlitz plot slopes and asymmetries with the KLOE detector
Autore/i : AMBROSINO F and ANTONELLI A and ANTONELLI M and ARCHILLI F and BACCI C and BELTRAME P and BENCIVENNI G and BERTOLUCCI S and BINI C and BLOISE C and BOCCHETTA S and BOSSI F and BRANCHINI P and CALOI R and CAMPANA P and CAPON G and CAPUSSELA T and CERADINI F and CESARIO F and CHI S and CHIEFARI G and CIAMBRONE P and CRUCIANELL F and DE LUCIA E and DE SANTIS A and DE SIMONE P and DE ZORZI G and DENIG A and DI DOMENICO A and DI DONATO C and DI MICCO B and DORIA A and DREUCCI M and FELICI G and FERRARI A and FERRER ML and FIORE S and FORTI C and FRANZINI P and GATTI C and GAUZZI P. and GIOVANNELLA S and GORINI E and GRAZIANI E and KLUGE W and KULIKOV V and LACAVA F and LANFRANCHI G and LEE-FRANZINI J and LEONE D and MARTINI M and MASSAROTTI P and MEI W and MEOLA S and MISCETTI S and MOULSON M and MULLER S and MURTAS F and NAPOLITANO M and NGUYEN F and PALUTAN M and PASQUALUCCI E and PASSERI A and PATERA V and PERFETTO F and PRIMAVERA M and SANTANGELO P and SARACINO G and SCIASCIA B and SCIUBBA A and SIBIDANOV A and SPADARO T and TESTA M and TORTORA L and VALENTE P and VENANZONI G and VERSACI R and XU G
Anno : 2008
Issn : 1126-6708

MACROAREA : A

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Dipartimento : Fisica

Nonequilibrium and dynamical systems

Nonequilibrio e sistemi dinamici

Project aims at the comprehension of a variety of classical, quantum and stochastic systems in chaotic and regular systems in non-equilibrium statistical mechanics and in Hamiltonian mechanics. The common viewpoint is provided by the methods of dynamical systems and probability theory,
such as multiscale analysis and the renormalization group.

a) Non-equilibrium statistical mechanics

1) Study of general relations between physical observables in non equilibrium stationary states (NESS), possibly independent of the details of the model, in the spirit of the Gallavotti-Cohen fluctuation relation.

2) Extension of the Gallavotti-Cohen chaotic hypothesis, of the notion of entropy creation and of the fluction relations to quantum systems. Equivalence between different thermostats and different NESS statistical ensemble.

b) Dynamical systems, classical mechanics, and applications.

1) Uniqueness of KAM tori of maximal or lower dimension; analysis of the breakdown thresholds.

2) Existence and regularity of quasi-periodic solutions in damped systems, e.g., in models of planet formation in the presence of background or tide damping, and in models describing resistive electric circuits.

3) Synchronisation phenomenon in simple models of coupled dissipative chaotic flows.

Altri partecipanti alla ricerca

Errico Presutti		SSD : MAT/07 - Fisica matematica
Guido Gentile	Under 40	SSD : MAT/07 - Fisica matematica
Federico Bonetto		SSD : MAT/07 - Fisica matematica
Alessandro Giuliani	Under 40	SSD : MAT/07 - Fisica matematica

Partner della ricerca

Jussieu (Universite' Paris 6)Paris, Francia
Rutgers UniversityCenter for Mathematical Physics
Ohio State University (Mathematics Dept)
Universidad Granada, Spain
Rockefeller University (New York)
Universite' Paris Dauphine
Institut des Hautes Etudes Scientifiques (IHES Paris France)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MATHEMATICAL PHYSICS
Titolo : Nonequilibrium, thermostats and thermodynamic limit
Autore/i : GALLAVOTTI G. and PRESUTTI E
Anno : 2010
Numero volume : 51,
Pagine da - a : 015202--+32
Issn : 0022-2488
Doi : 10.1063/1.3257618
Nome rivista o titolo libro o atti conferenza : ERGODIC THEORY & DYNAMICAL SYSTEMS

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MATHEMATICAL PHYSICS
Titolo : A fluctuation theorem in a random environment
Autore/i : F. BONETTO and GALLAVOTTI G. and G.GENTILE
Anno : 2008
Numero volume : 28,
Pagine da - a : 21--47
Issn : 0143-3857
Doi : 10.1017/S0143385707000417
Nome rivista o titolo libro o atti conferenza : JOURNAL OF MATHEMATICAL PHYSICS
Titolo : Fractional Lindstedt series
Autore/i : GALLAVOTTI G. and GENTILE G and GIULIANI and A
Anno : 2006
Numero volume : 47,
Pagine da - a : 012702--1--012702--33
Issn : 0022-2488
Doi : 10.1063/1.2157052

MACROAREA : A

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Lucifer: scintillating bolometry for the search of neutrinoless double beta decay

Lucifer: Bolometria scintillante per la ricerca del decadimento doppio beta

Mysteries about neutrinos are several and of different nature. We know that they are neutral particles with an extraordinary (but unknown) little mass. We do not know if the neutrino is a particle different from its antiparticle or rather, as hypothesized by Majorana, they are the same particle. If the Majorana conjecture holds it would be possible to observe an extremely rare process (T1/2 >10**26 y)
called neutrinoless double beta decay. The experimental investigation of this process definitely requires a large amount of DBD emitter, in ultra-low background detectors with the capability of selecting reliably the signal from the background. The bolometric technique offers several advantages and it has been demonstrated viable by the CUORICINO experiment at LNGS. The natural way to eliminate the background would be to use a scintillating bolometer where the simultaneous and independent read out of the heat and the scintillation light permits to discriminate events due to alfa, beta/gamma and neutrons thanks to their different response. The scope of the project Lucifer is to build an array of ZnSe (with 15 Kg of 82Se isotopically enriched) for demonstrating the power of this technique and possibly measure the double beta decay. The project is financed by an ERC Advanced Grant.

Altri partecipanti alla ricerca

Marco Vignati	Under 40	SSD : FIS/01 - Fisica sperimentale
Laura Cardani	Under 40	SSD : FIS/01 - Fisica sperimentale
Fabio Bellini	Under 40	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Laboratori Nazionali del Gran Sasso dell'Istituto Nazionale di Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF INSTRUMENTATION

Titolo : Response of a TeO2 bolometer to alpha particles

Autore/i : Bellini F. ,Biassoni M., Bucci C., Casali N., and Dafinei I. , Ge Z., Gorla P., Ferroni F., Orio F., Tomei C., Vignati M. and Zhu Y.

Anno : 2010

Numero volume : 5

Pagine da - a : P12005

Issn : 1748-0221

Doi : 10.1088/1748-0221/5/12/P12005

Nome rivista o titolo libro o atti conferenza : Journal of Physics Conference Series

Titolo : Calorimetry at 10-mK

Autore/i : Ferroni F.

Anno : 2011

Numero volume : 293

Pagine da - a : 012005

Doi : 10.1088/1742-6596/293/1/012005

Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON NUCLEAR SCIENCE

Titolo : Low Temperature Scintillation in ZnSe Crystals

Autore/i : Dafinei I., Fasoli M., Ferroni F., Mihokova E., Orio F., Pirro S. and Vedda A.

Anno : 2010

Numero volume : 57

Pagine da - a : 1470-1474

Issn : 0018-9499

Doi : 10.1109/TNS.2009.2035914

MACROAREA : A

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Dipartimento : Fisica

Exotic Hadron Spectroscopy

Spettroscopia adronica esotica

Ordinary matter, like the nuclei of the atoms, are made of bound states of three quarks, and since decades we observe states made of a quark and an antiquark.

Recent observation of particles that do not behave as neither of these combinations has opened the issue on whether there exist bound states of more than three quarks. Their existence would cast new light on the strong interactions that are responsible for the coherence of the nuclei themselves.

The BaBar experiment is a multi-purpose experiment on the PEP-II accelerator at the Stanford Linear Accelerator Center. Built for a completely different search in particle physics, it has ended up first discovering and then further investigating these phenomena. A lot of different signatures characterizes these phenomena: they can appear as particles which live too much for the number of channels they could decay into or as broad structures in the probability of observing hadronic events while changing the center of mass energy of the accelerator.

The department of physics of Rome has hosted both a strong experimental group on this experiment and a group of phenomenologists working on the interpretation of such states. The collaboration among the twos has lead to the first complete picture on the topic.

Altri partecipanti alla ricerca

Antonio Davide Polosa	Under 40	SSD : FIS/02 - Fisica teorica, modelli e metodi matematici
mario gaspero		SSD : FIS/01 - Fisica sperimentale
Fernando Ferroni		SSD : FIS/01 - Fisica sperimentale
Daniele Del Re	Under 40	SSD : FIS/01 - Fisica sperimentale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Rivista del Nuovo Cimento
Titolo : New Hadronic Spectroscopy.
Autore/i : N.V. Drenska, R. Faccini, A.D. Polosa
Anno : 2010
Numero volume : 33
Pagine da - a : 633-712
Doi : 10.1393/ncr/i2010-10059-8
Nome rivista o titolo libro o atti conferenza : Phys. Rev
Titolo : Exotic hadrons with hidden charm and strangeness
Autore/i : DRENSKA NV, FACCINI R., POLOSA AD
Anno : 2009
Numero volume : D79
Pagine da - a : 077502-077502
Issn : 1550-7998
Doi : 10.1103/PhysRevD.79.077502
Nome rivista o titolo libro o atti conferenza : Phys. Rev. Lett.
Titolo : Charmed Baryonium
Autore/i : FACCINI R., POLOSA AD, SABELLI C
Anno : 2010
Numero volume : 104
Pagine da - a : 132005-132005
Issn : 0031-9007
Doi : 10.1103/PhysRevLett.104.132005

MACROAREA : A

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Test of CPT symmetry and quantum coherence in the neutral kaon system at KLOE

Test della simmetria CPT e di coerenza quantistica nel sistema dei mesoni K neutri a KLOE

A unique feature of a Phi-factory is the production of neutral kaon pairs in a pure quantum state with the consequent possibility to study quantum interference effects. The correlation between the two kaons opens up new horizons in the study of discrete symmetries and of the basic principles of quantum mechanics. For instance possible CPT violations could manifest in conjunction with tiny modifications of the initial correlation, decoherence effects, or Lorentz symmetry violations, which, in turn, might be justified in a quantum theory of gravity.

The KLOE experiment running at the DAFNE phi-factory collider, located near Rome at the Frascati laboratories of Istituto Nazionale Fisica Nucleare, collected data in the period 2001-2006. KLOE put the most stringent limits on several observable effects of decoherence and/or CPT violation, reaching in some cases a precision at the level of the interesting Planck scale region, i.e. O(mK2/Mplanck)~2 x 10-20 GeV, which is a very remarkable level of accuracy,

presently unreachable in other similar systems. Significant improvements of the results obtained by KLOE are expected at KLOE-2, the upgraded KLOE detector, which is presently starting taking data at the DAFNE collider improved in luminosity.

Altri partecipanti alla ricerca

Cesare Bini SSD : FIS/01 - Fisica sperimentale

Paolo Gauzzi SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Istituto Nazionale Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : FOUNDATIONS OF PHYSICS
Titolo : CPT Symmetry and Quantum Mechanics Tests in the Neutral Kaon System at KLOE
Autore/i : DI DOMENICO A.
Anno : 2010
Numero volume : 40,
Pagine da - a : 852--866
Issn : 0015-9018
Doi : 10.1007/s10701-009-9366-x

Nome rivista o titolo libro o atti conferenza : PHYSICS LETTERS. SECTION B
Titolo : First observation of quantum interference in the process phi -> KSKL -> pi(+)pi(-)pi(+)pi(-): A test of quantum mechanics and C P T symmetry
Autore/i : AMBROSINO F and ANTONELLI A and ANTONELLI M and BACCI C and BELTRAME P and BENCIVENNI G and BERTOLUCCI S and BINI C and BLOISE C and BOCCHETTA S and BOCCI V and BOSSI F and BOWRING D and BRANCHINI P and CALOI R and CAMPANA P and CAPON G and CAPUSSELA T and CERADINI F and CHI S and CHIEFARI G and CIAMBRONE P and CONETTI S and DE LUCIA E and DE SANTIS A and DE SIMONE P and DE ZORZI G and DELL'AGNELLO S and DENIG A and DI DOMENICO A. and DI DONATO C and DI FALCO S and DI MICCO B and DORIA A and DREUCCI M and FELICI G and FERRARI A and FERRER ML and FINOCCHIARO G and FIORE S and FORTI C and FRANZINI P and GATTI C and GAUZZI P and GIOVANNELLA S and GORINI E and GRAZIANI E and INCAGLI M and KLUGE W and KULIKOV V and LACAVA F and LANFRANCHI G and LEE-FRANZINI J and LEONE D and MARTINI M and MASSAROTTI P and MEI W and MEOLA S and MISCETTI S and MOULSON M and MULLER S and MURTAS F and NAPOLITANO M and NGUYEN F and PALUTAN M and PASQUALUCCI E and PASSERI A and PATERA V and PERFETTO F and PONTECORVO L and PRIMAVERA M and SANTANGELO P and SANTOVETTI E and SARACINO G and SCIASCIA B and SCIUBBA A and SCURI F and SFILIGOI I and SIBIDANOV A and SPADARO T and TESTA M and TORTORA L and VALENTE P and VALERIANI B and VENANZONI G and VENEZIANO S and VENTURA A and VERSACI R and XU G
Anno : 2006
Numero volume : 642,
Pagine da - a : 315--321
Issn : 0370-2693
Doi : 10.1016/j.physletb.2006.09.046

Nome rivista o titolo libro o atti conferenza : HANDBOOK ON NEUTRAL KAON INTERFEROMETRY AT A PHI-FACTORY
Titolo : NEUTRAL KAON INTERFEROMETRY AT A PHI-FACTORY
Autore/i : DI DOMENICO A.
Anno : 2007

Nome rivista o titolo libro o atti conferenza : FOUNDATIONS OF PHYSICS
Numero volume : 43,
Pagine da - a : 1--38
Isbn : 978---88--86409--50--8

MACROAREA : A

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Search for a Higgs boson decaying into two photons with the CMS detector

Ricerca del bosone di Higgs nel decadimento in due fotoni

The Standard Model of particle physics explains how fundamental particles interact with each other. In the last decades the experiments checked the validity of this Model to a high degree of precision but the last missing ingredient is the discovery of the Higgs. One of the main goal of the CMS detector, which is an experimental apparatus operating at the Large Hadron Collider, is the Higgs search.
The present data seems to favor a light Higgs boson. In this scenario the two-photon decay provides the golden channel for its discovery. The analysis of this mode is very challenging since it requires a performing and precisely calibrated electromagnetic calorimeter (ECAL) in order to detect the signal of electromagnetic showers initiated by photons.
We participated to the construction and the commissioning of the ECAL, being responsible for its assembly and testing. In preparation of the Higgs search, we were also deeply involved in the energy and time calibration. In addition we played an important role in the analysis of the first data collected by CMS in 2010. These studies produced some of the early publications of the experiment.
The Sapienza Physics Department, in collaboration with INFN, has hosted the group of physicists who led this effort.

Altri partecipanti alla ricerca

Shahram Rahatlou	Under 40	SSD : FIS/01 - Fisica sperimentale
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Luciano Barone		SSD : FIS/01 - Fisica sperimentale
Egidio Longo		SSD : FIS/01 - Fisica sperimentale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW LETTERS
Titolo : Search for Dijet Resonances in 7 TeV pp Collisions at CMS
Autore/i : L. Barone, D. del Re, E. Longo, G. Organtini, S. Rahatlou, et al.}
Anno : 2010
Numero volume : 105
Pagine da - a : 211801
Doi : 10.1103/PhysRevLett.105.211801
Nome rivista o titolo libro o atti conferenza : JOURNAL OF INSTRUMENTATION
Titolo : The CMS experiment at the CERN LHC
Autore/i : L. Barone, D. del Re, E. Longo, G. Organtini, S. Rahatlou, et al.
Anno : 2008
Numero volume : 3
Pagine da - a : S08004
Doi : 10.1088/1748-0221/3/08/S08004

Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW LETTERS
Nome rivista o titolo libro o atti conferenza : JOURNAL OF INSTRUMENTATION
Titolo : Intercalibration of the barrel electromagnetic calorimeter of the CMS experiment at start-up
Autore/i : L. Barone, D. del Re, E. Longo, G. Organtini, S. Rahatlou, et al.
Anno : 2008
Numero volume : 3
Pagine da - a : P10007
Isbn : 10.1088/1748-0221/3/10/P10007

MACROAREA : A

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Cosmology by ground-based observations of Sunyaev-Zel'dovich Effect

Cosmologia tramite osservazioni da terra dell'Effetto Sunyaev-Zel'dovich

The photons of the Cosmic Microwave Background, on their way towards us from the last scattering surface, interact with cosmic structures and their frequency, energy or direction of propagation are affected. The Sunyaev-Zel'dovich Effect (SZE) is one of these Secondary Anisotropies based on the inverse Compton scattering between CMB photons and free electrons. SZE observations from the ground at mm-wavelengths is the main goal of this research activity. Dedicated instruments are designed and realised to be installed at the focal plane of MITO's telescope (Millimeter and Infrared Testagrigia Observatory, 3450 m asl, Alps).
Since 1991 I coordinate the research activity linked to MITO.
The experimental work is also enriched with data analysis, forecast of observations by simulating observational strategies and with the study of SZE cosmological implications (see as example CMB temperature redshift evolution).
A first 4-channel photometer has been upgraded to an array of detectors (MAD), both fully developed in the group, allowing an easy mapping of the sky and an efficient removal of atmospheric emission. A wide band (2mm - 800 micron) low resolution spectrometer (CASPER2) has been specifically realised for a careful monitoring of the atmosphere emission.

Altri partecipanti alla ricerca

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Simone De Gregori	Under 40	SSD : FIS/05 - Astronomia e astrofisica

Partner della ricerca

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Istituto di Fisica dello Spazio Interplanetario - INAF, ITALY, prof. C. Morello
School of Physics and Astronomy - Tel Aviv - ISRAEL, prof. Y. Rephaeli & dr. M. Shimon
Istituto di Astrofisica delle Canarie - Tenerife - SPAIN, prof. R. Rebolo & dr. A. Rubino-Martins
IEM - Madrid - SPAIN, prof. J.R. Pardo

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
Titolo : Redshift Dependence Of The Cosmic Microwave Background Temperature From Sunyaev-Zeldovich Measurements
Autore/i : LUZZI G, SHIMON M, LAMAGNA L, REPHAELI Y, DE PETRIS M, CONTE A, DE GREGORI S and

Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
BATTISTELLI ES
Anno : 2009
Numero volume : 705,
Pagine da - a : 1122--1128
Issn : 0004-637X
Doi : 10.1088/0004-637X/705/2/1122
Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
Titolo : Millimetric observation of the SZ effect in the Corona Borealis supercluster
Autore/i : E.S.BATTISTELLI, DE PETRIS M, L. LAMAGNA, R.A.WATSON, R.REBOLO, F.MELCHIORRI, R. GENOVA-SANTOS, G.LUZZI, S. DE GREGORI, J.A. RUBNIO-MARTIN, R.D.DAVIES, R.J.DAVIS, K. GRAINGE, M.P. HOBSON, R.D.E.SAUNDERS and P.F.SCOVILLE
Anno : 2006
Numero volume : 645,
Pagine da - a : 826--834
Issn : 0004-637X
Nome rivista o titolo libro o atti conferenza : NEW ASTRONOMY REVIEWS
Titolo : MITO: a "creative approach" for Sunyaev-Zel'dovich effect observations from ground
Autore/i : DE PETRIS M., L. LAMAGNA, G. LUZZI, S. DE GREGORI, E. S. BATTISTELLI, L. BONAVERA, E. CACA, R. CORATELLA, V. LATTANTI, F. MANCINI, A. ORLANDO, G. SAVINI, S. STEFANI, C. TOMBARI, F. VASCIARELLI and G. VETRANI
Anno : 2007
Numero volume : 51,
Pagine da - a : 368--373
Issn : 1387-6473

MACROAREA : A

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Universal scaling between structural relaxation and vibrational dynamics in glass-forming liquids, gels and polymers

Curva universale tra il rilassamento strutturale e la dinamica vibrazionale in liquidi sottoraffreddati, gel e polimeri

On approaching glass transition (GT), the microscopic kinetic unit spends increasing time rattling within the cage of the first neighbors, whereas its average escape time, the structural relaxation time (SRT), increases from a few picoseconds up to thousands of seconds.
A thorough study of the correlation between SRT and the rattling amplitude was carried out performing molecular-dynamics (MD) simulations of both a model polymer system, a binary mixture and a colloid. Our simulations, together with MD studies on other glassformers, evidence the scaling between structural relaxation and caged dynamics. A theoretical model of the master curve, that does not imply any divergence of SRT, is developed. This result implies that GT may occur only at zero temperature and it questions the validity of several GT theories. Comparison with experiments also supports the numerical evidence over a range of relaxation times as wide as about eighteen orders of magnitude. Our study suggests that the equilibrium and the moderately supercooled states of glassformers possess key information on the huge slowing-down of their relaxation close to the GT,supporting the validity of computer simulations in

investigating glassy systems even if simulations time scales are much shorter than experimental ones

Altri partecipanti alla ricerca

Dino Leporini		SSD : FIS/01 - Fisica sperimentale
Alistar Ottochian	Under 40	SSD : FIS/03 - Fisica della materia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Soft Matter
Titolo : Scaling between structural relaxation and particle caging in a model colloidal gel
Autore/i : C. De Michele, E. Del Gadob e D. Leporini
Anno : 2011
Numero volume : 7
Pagine da - a : 4025-4031
Doi : DOI: 10.1039/c0sm00941e
Nome rivista o titolo libro o atti conferenza : Nature Physics
Titolo : Universal scaling between structural relaxation and vibrational dynamics in glass-forming liquids and polymers
Autore/i : L. Larini, A. Ottochian, C. De Michele e D. Leporini
Anno : 2008
Numero volume : 4
Pagine da - a : 42-45
Doi : 10.1038/nphys788
Nome rivista o titolo libro o atti conferenza : Journal of Chemical Physics?
Titolo : Universal divergenceless scaling between structural relaxation and caged dynamics in glass-forming systems
Autore/i : A. Ottochian, C. De Michele e D. Leporini
Anno : 2009
Numero volume : 131
Pagine da - a : 224517
Doi : doi:10.1063/1.3269041

MACROAREA : A

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Precision Measurements of the Cosmic Microwave Background: After Planck

Misure di Precisione del Fondo Cosmico a Microonde: Dopo Planck

Precision measurements of the Cosmic Microwave Background (CMB) started with the maps of BOOMERanG and MAXIMA at the end of the 90s, two balloon-borne missions where our group in La Sapienza played a key role. They have been so successful that two satellite missions (WMAP and Planck) have been launched to measure the minute anisotropy and polarization patterns of the CMB. The standard model of cosmology, including a hot beginning with an inflation phase, dark matter dominated growth of structures, and a late dark-energy phase, has been (and is being) validated against these data, and quantitative estimates of the cosmological parameters have been obtained. This research field has growth exponentially in the last 15 years, and is now ready for a further leap forward with the development of large arrays of millimeter-wave detectors with polarimetric and spectroscopic capabilities. Our group is at the forfront of this experimental activity, with the development of large arrays of Kinetic Inductance Detectors (now built in Italy by our collaboration), precision polarimeters, differential spectrometers, and the test of these new devices on balloon flights, in view of third-generation space missions for mm-wave cosmology (see attached papers)

Altri partecipanti alla ricerca

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Partner della ricerca

APC Paris, Department of Physics, University of Calfornia at Berkeley, Fondazione Bruno Kessler - Trento

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ASTROPARTICLE PHYSICS
Titolo : QUBIC: The QU Bolometric Interferometer for Cosmology
Autore/i : E. BATTISTELLI and A. BAÙ and D. BENNETT and L. BERGE and J.-PH. BERNARD and DE BERNARDIS P. and G. BORDIER and A. BOUNAB and E. BRÉELLE and E.F. BUNN and M. CALVO and R. CHARLASSIER and S. COLLIN and A. COPPOLECCHIA and A. CRUCIANI and G. CURRAN and L. DUMOULIN and A. GAULT and M. GERVASI and A. GHRIBI and M. GIARD and C. GIORDANO and Y. GIRAUD-HERAUD and M. GRADZIEL and L. GUGLIELMI and J.-CH. HAMILTON and V. HAYNES and J. KAPLAN and A. KOROTKOV and J. LANDE and B. MAFFEI and M. MAIELLO and S. MALU and S. MARNIEROS and J. MARTINO and S. MASI and A. MURPHY and F. NATI and C. OSULLIVAN and F. PAJOT and A. PASSERINI and S. PETERZEN and M. DE PETRIS and F. PIACENTINI and M. PIAT and L. PICCIRILLO and G. PISANO and G. POLENTA and D. PRELE and D. ROMANO and C. ROSSET and M. SALATINO and A. SCHILLACI and G. SIRONI and R. SORDINI and S. SPINELLI and A. TARTARI and P. TIMBIE and G. TUCKER and L VIBERT and F. VOISIN and R.A. WATSON and M. ZANNONI
Anno : 2011
Numero volume : 34,
Pagine da - a : 705--716
Issn : 0927-6505
Doi : 10.1016/j.astropartphys.2011.01.012
Nome rivista o titolo libro o atti conferenza : ASTRONOMY & ASTROPHYSICS
Titolo : A cryogenic waveplate rotator for polarimetry at mm and submm wavelengths
Autore/i : SALATINO M and DE BERNARDIS P. and MASI S
Anno : 2011
Numero volume : 528,
Pagine da - a : A138--1--A138--8
Issn : 0004-6361
Doi : 10.1051/0004-6361/201015288
Nome rivista o titolo libro o atti conferenza : EXPERIMENTAL ASTRONOMY
Titolo : Development of Kinetic Inductance Detectors for Cosmic Microwave Background experiments
Autore/i : CALVO M and GIORDANO C and BATTISTON R and DE BERNARDIS P. and MARGESIN B and MASI S and MONFARDINI A
Anno : 2010
Numero volume : 28,
Pagine da - a : 185--194
Issn : 0922-6435
Doi : 10.1007/s10686-010-9197-y

MACROAREA : A

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Search for continuous gravitational waves from known pulsars

Ricerca di onde gravitazionali continue emesse da pulsar note

The direct observation of gravitational waves is one of the biggest challenges in contemporary astrophysics. To this goal, kilometer-size interferometric gravitational wave detectors (Virgo, LIGO, GEO) have been built and are operating since a few years.

Our research group is one of the leading groups in the search of continuous gravitational wave signals, which are expected to be emitted by rotating asymmetric neutron stars.

Even though no detection has been claimed until now, the analysis of the data can allow to put upper limits of astrophysical relevance. This implies the developement of very powerful data anlysis methods in order to extract the tiny signal from the detector noise. We have published various papers describing the techniques used to clean the data from noise disturbances and to improve the search sensitivity.

These methods have been applied for the search of continuous gravitational waves from the Vela pulsar, using data collected by the Virgo interferometer in 2009. We have placed the best upper limit on the gravitational wave signal amplitude for this pulsar, constraining the fraction of the pulsar's spin down energy emitted as gravitational waves. Moreover, our results also constrain the intensity of the inner magnetic field causing the pulsar asymmetry.

Altri partecipanti alla ricerca

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Sergio Frasca		SSD : FIS/05 - Astronomia e astrofisica
Pia Astone		SSD : FIS/05 - Astronomia e astrofisica
Sabrina D'Antonio		SSD : FIS/05 - Astronomia e astrofisica
Cristiano Palomba		SSD : FIS/05 - Astronomia e astrofisica
Elena Cuoco		SSD : FIS/05 - Astronomia e astrofisica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Astrophysical Journal
Titolo : Beating the Spin-down Limit on Gravitational Wave Emission from the Vela Pulsar
Autore/i : The Virgo Collaboration, Anno : 2011, Numero volume : 737
Doi : 10.1088/0004-637X/737/2/93
Nome rivista o titolo libro o atti conferenza : Classical and Quantum Gravity
Titolo : Cleaning the Virgo sampled data for the search of periodic sources of gravitational waves
Autore/i : The Virgo Collaboration, Anno : 2009, Numero volume : 26
Doi : 10.1088/0264-9381/26/20/204002
Nome rivista o titolo libro o atti conferenza : Journal of Physics: Conference series
Titolo : Tools for noise characterization in Virgo
Autore/i : The Virgo Collaboration, Anno : 2010, Numero volume : 243
Doi : doi:10.1088/1742-6596/243/1/012004

MACROAREA : A

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Search for Majorana neutrino through Neutrinoless Double Beta Decay

Ricerca del neutrino di Majorana tramite il Decadimento Doppio Beta senza emissioni di neutrini

The study of neutrino properties is one of the fundamental challenges in Particle Physics nowadays.
Fifty years of neutrino investigations established that neutrinos are massive particles but the absolute scale has not yet been measured.
Moreover the true nature of the neutrino is still unknown. Is the neutrino its own antiparticle, as proposed by Majorana in 1937, or not?
The only way to probe the neutrino nature and provide a measurement of its mass is through the observation of Neutrinoless Double Beta Decay, a very rare, spontaneous nuclear transition which emits two electrons and no neutrinos.
This research has been carried out by an experimental group of the Sapienza Physics Department in the framework of the "CUORICINO" international collaboration.
To this purpose, a large number of Tellurium Dioxide detectors have been operated at a temperature of a few mK in the Gran Sasso national underground laboratory. No evidence of the Neutrinoless Double Beta Decay has been observed, however the best limit has been set on both the half life of such decay and the neutrino mass.

Altri partecipanti alla ricerca

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Carlo Cosmelli	SSD : FIS/01 - Fisica sperimentale
riccardo faccini	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Istituto Nazionale di Fisica Nucleare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ASTROPARTICLE PHYSICS
Titolo : 130TE NEUTRINOLESS DOUBLE-BETA DECAY WITH CUORICINO
Autore/i : E. Andreotti, C. Arnaboldi, F. T. Avignone III, M. Balata, I. Bandac, M. Barucci, J. W. Beeman, F. Bellini, C. Brofferio, A. Bryant, C. Bucci, L. Canonica, S. Capelli, L. Carbone, M. Carrettoni, M. Clemenza,
Numero volume : 34,
Pagine da - a : 822--831
Issn : 0927-6505
Doi : 10.1016/j.astropartphys.2010.02.002
Nome rivista o titolo libro o atti conferenza : ASTROPARTICLE PHYSICS
Titolo : Search for beta(+)/EC double beta decay of (120)Te
Autore/i : ANDREOTTI E and ARNABOLDI C and AVIGNONE FT and BALATA M and BANDAC I and BARUCCI M and BEEMAN JW and BELLINI F. and BROFFERIO C and BRYANT A and BUCCI C and CANONICA L and CAPELLI S and CARBONE L and CARRETTONI M and CLEMENZA M and CREMONESI O and CRESW
Numero volume : 34,
Pagine da - a : 643--648

Nome rivista o titolo libro o atti conferenza : ASTROPARTICLE PHYSICS
Issn : 0927-6505
Doi : 10.1016/j.astropartphys.2010.12.011
Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW. C, NUCLEAR PHYSICS
Titolo : Results from a search for the 0 v beta beta-decay of Te-130
Autore/i : ARNABOLDI C and ARTUSA DR and AVIGNONE FT and BALATA M and BANDAC I and BARUCCI M and BEEMAN JW and BELLINI F. and BROFFERIO C and BUCCI C and CAPELLI S and CARBONE L and CEBRIAN S and CLEMENZA M and CREMONESI O and CRESWICK RJ and DE WAARD A and DI DOMIZIO S and DOLINSKI MJ and FARACH HA and FIORINI E and FROSSATI G and GIACHERO A and GIULIANI A and GORLA P and GUARDINCERRI E and GUTIERREZ TD and HALLER EE and MARUYAMA RH and MCDONALD RJ and NISI S and NONES C and NORMAN EB and NUCCIOTTI A and OLIVIERI E and PALLAVICINI M and PALMIERI E and PASCA E and PAVAN M and PEDRETTI M and PESSINA G and PIRRO S and PREVITALI E and RISEGARI L and ROSENFELD C and SANGIORGIO S and SISTI M and SMITH AR and TORRES L and VENTURA G and VIGNATI M
Anno : 2008
Numero volume : 78,
Issn : 0556-2813
Doi : 10.1103/PhysRevC.78.035502

MACROAREA : A

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The Sunyaev Zel'dovich effect: unveiling the nature of dark matter and dark energy.

L'effetto Sunyaev Zel'dovich: un metodo per comprendere l'origine di materia ed energia oscura.

The nature of Dark Energy (DE), Dark Matter (DM) and Barionic Dark Matter (BDM), is still matter of discussion among Cosmologists. The Sunyaev Zeldovich effect (SZE), arising from the interaction of the Cosmic Background Radiation (CMB) photons with hot electrons in Clusters of Galaxies (GC), offers a unique method to unveil the nature of these Dark parts being sensitive to relatively low density diffuse matter (a possible explanation for BDM) and to GC formation and thus to DE.

Since 2004, Elia Battistelli is particularly active in SZE measurements and instrumentation development. In 2006 he led the collaboration between the Sapienza University and the IAC (Spain) and the joint observations of the Corona Borealis Supercluster performed by the Anglo-Spanish VSA instrument and the Italian MITO telescope: this determined the first millimetric evidence of diffuse intra-supercluster gas (Battistelli et al, 2006). Since 2007, Elia Battistelli has a key role in the construction and measurements taken by the Atacama Cosmology Telescope (ACT). ACT is allowing to measure the SZE toward known GC (Hincks et al, 2010) and discover new GC from SZE measurements and optical follow-up (Menanteau et al, 2010): a first step toward the construction of the Dark Energy equation of state.

Partner della ricerca

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University of British Columbia, Vancouver, Canada

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
Titolo : The Atacama Cosmology Telescope: Physical Properties and Purity of a Galaxy Cluster Sample Selected via the Sunyaev-Zel'dovich Effect

Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
Autore/i : MENANTEAU FELIPE and GONZÁLEZ JORGE and JUIN JEAN-BAPTISTE and MARRIAGE TOBIAS A and REESE ERIK D and ACQUAVIVA VIVIANA and AGUIRRE PAULA and APPEL JOHN WILLIAM and BAKER ANDREW J and BARRIENTOS L. FELIPE and BATTISTELLI E. and BOND J. RICHARD and DAS SUDEEP and DESHPANDE AMRUTA J and DEVLIN MARK J and DICKER SIMON and DUNKLEY JOANNA and DÜNNER ROLANDO and ESSINGER-HILEMAN THOMAS and FOWLER JOSEPH W and HAJIAN AMIR and HALPERN MARK and HASSELFIELD MATTHEW and HERNÁNDEZ-MONTEAGUDO CARLOS and HILTON MATT and HINCKS ADAM D and HLOZEK RENÉE and HUFFENBERGER KEVIN M and HUGHES JOHN P and INFANTE LEOPOLDO and IRWIN KENT D and KLEIN JEFF and KOSOWSKY ARTHUR and LIN YEN-TING and MARSDEN DANICA and MOODLEY KAVILAN and NIEMACK MICHAEL D and NOLTA MICHAEL R and PAGE LYMAN A and PARKER LUCAS and PARTRIDGE BRUCE and SEHGAL NEELIMA and SIEVERS JON and SPERGEL DAVID N and STAGGS SUZANNE T and SWETZ DANIEL and SWITZER ERIC and THORNTON ROBERT and TRAC HY and WARNE RYAN and WOLLACK ED
Anno : 2010
Numero volume : 723,
Pagine da - a : 1523--1541
Issn : 0004-637X
Doi : 10.1088/0004-637X/723/2/1523
Nome rivista o titolo libro o atti conferenza : ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES
Titolo : The Atacama Cosmology Telescope (ACT): Beam Profiles and First SZ Cluster Maps
Autore/i : HINCKS A. D and ACQUAVIVA V and ADE P and AGUIRRE P and AMIRI M and APPEL J. W and BARRIENTOS L. F and BATTISTELLI E. and BOND J. R and BROWN B and BURGER B and CHERVENAK J and DAS S and DEVLIN M. J and DICKER S and DORIESE W. B and DUNKLEY J and DÜNNER R and ESSINGER-HILEMAN T and FISHER R. P and FOWLER J. W and HAJIAN A and HALPERN M and HASSELFIELD M and HERNÁNDEZ-MONTEAGUDO C and HILTON G. C and HILTON M and HLOZEK R and HUFFENBERGER K and HUGHES D and HUGHES J. P and INFANTE L and IRWIN K. D and JIMENEZ R and JUIN J. B and KAUL M and KLEIN J and KOSOWSKY A and LAU J. M and LIMON M and LIN Y. -T and LUPTON R. H and MARRIAGE T and MARSDEN D and MARTOCCI K and MAUSKOPF P and MENANTEAU F and MOODLEY K and MOSELEY H and NETTERFIELD C. B and NIEMACK M. D and NOLTA M. R and PAGE L. A and PARKER L and PARTRIDGE B and QUINTANA H and REID B and SEHGAL N and SIEVERS J and SPERGEL D. N and STAGGS S. T and STRYZAK O and SWETZ D and SWITZER E and THORNTON R and TRAC H and TUCKER C and VERDE L and WARNE R and WILSON G and WOLLACK E and ZHAO Y
Anno : 2010
Numero volume : 191,
Pagine da - a : 423--438
Issn : 0067-0049
Doi : 10.1088/0067-0049/191/2/423
Nome rivista o titolo libro o atti conferenza : THE ASTROPHYSICAL JOURNAL
Titolo : Millimeter Observation of the SZ Effect in the Corona Borealis Supercluster
Autore/i : BATTISTELLI E. and DE PETRIS M and LAMAGNA L and WATSON R. A and REBOLO R and MELCHIORRI F and GÉNOVA-SANTOS R and LUZZI G and DE and GREGORI S and RUBIÑO-MARTIN J. A and DAVIES R. D and DAVIS R. J and GRAINGE K and HOBSON M. P and SAUNDERS R. D. E and SCOTT P. F
Anno : 2006
Numero volume : 645,
Pagine da - a : 826--834
Issn : 0004-637X

MACROAREA : A

Paolo Bagnaia
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Dipartimento : Fisica

The ATLAS detector at the LHC : preparation for the data analysis.

L'esperimento ATLAS a LHC : preparazione per l'analisi dei dati

The Large Hadron Collider (LHC) at CERN extends the frontiers of particle physics with its unprecedented high energy and luminosity.

ATLAS is a general-purpose esperiment, whose design fully covers the large range of LHC physics : searches for Higgs bosons and alternative schemes for the spontaneous symmetry-breaking mechanism; searches for supersymmetric particles, new gauge bosons, leptoquarks, quark and lepton compositeness, indicating new physics beyond the Standard Model; studies of the origin of CP violation via high-precision measurements of CP-violating B-decays; high-precision measurements of the third quark family (top and bottom hadrons).

The detection and the precision measurement of leptons, in particular electrons and muons, is crucial for this physics programme. The muon spectrometer reconstructs the muon trajectories with high precision and measure their momenta with high precision chambers. Our group has built and tested a significant fraction of such detectors, composed by 3 cm diameter cylindrical drift tubes assembled in layers. The chambers allow to measure the muon trajectories with a single-hit resolution of less than 100 μm over a range of tens of square meters. They have been installed and commissioned in ATLAS. We are now analysing their data.

Altri partecipanti alla ricerca

Francesco Lacava		SSD : FIS/01 - Fisica sperimentale
Claudio Luci		SSD : FIS/01 - Fisica sperimentale
Stefano Giagu		SSD : FIS/01 - Fisica sperimentale
Elena Solfaroli Camillocci	Under 40	SSD : FIS/04 - Fisica nucleare e subnucleare
Cesare Bini		SSD : FIS/01 - Fisica sperimentale
Antonio DiDomenico		SSD : FIS/01 - Fisica sperimentale
Carlo Dionisi		SSD : FIS/01 - Fisica sperimentale
Paolo Gauzzi		SSD : FIS/01 - Fisica sperimentale
Simonetta Gentile		SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

INFN - Istituto Nazionale di Fisica Nucleare
CERN - European Organization for Nuclear Research

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE EUROPEAN PHYSICAL JOURNAL. C, PARTICLES AND FIELDS
Titolo : Commissioning of the ATLAS Muon Spectrometer with cosmic rays
Autore/i : AAD G and BAGNAIA P. and et al.
Anno : 2010
Numero volume : 70,
Pagine da - a : 875--916
Issn : 1434-6044
Doi : 10.1140/epjc/s10052-010-1415-2
Nome rivista o titolo libro o atti conferenza : JOURNAL OF HIGH ENERGY PHYSICS
Titolo : Performance of the ATLAS detector using first collision data

Nome rivista o titolo libro o atti conferenza : THE EUROPEAN PHYSICAL JOURNAL. C, PARTICLES AND FIELDS
Autore/i : AAD G and BAGNAIA P. and et al.
Anno : 2010
Issn : 1126-6708
Nome rivista o titolo libro o atti conferenza : NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH. SECTION A, ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT
Titolo : Study of the ATLAS MDT spectrometer using high energy CERN combined test beam data
Autore/i : ADORISIO C and BAGNAIA P. and et al.
Anno : 2009
Numero volume : 598,
Pagine da - a : 400--415
Issn : 0168-9002
Doi : 10.1016/j.nima.2008.09.031

MACROAREA : A

Andrea Sambusetti

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Dipartimento : Matematica

Dynamics of Kleinian groups and their quotients

Dinamica dei gruppi Kleiniani e dei loro quozienti

We study discrete groups of isometries of negatively curved spaces, specifically their exponential growth rate (entropy/critical exponent).
In my 2008 paper I proved that the universal covering of a compact negatively curved space is characterized by having the greatest growth rate among all Galois coverings, and I deduced estimates on the length of closed geodesics and on the bottom of the Laplacian in terms of asymptotic invariants.
In the papers with F. Dal'bo, M. Peigne and J.C. Picaud we go further in the investigation of the possible exponential growth rates of Galois coverings, for geometrically finite manifolds. In our first paper together, we consider manifolds of finite volume, and characterize the cases (homogeneous and 1/4 pinched-spaces) where the exponential growth of volume in the universal covering equals the critical exponent of the automorphisms group. In the second one, we analyze the case of general Galois coverings and quotients of Kleinian groups, proving the growth tightness of geometrically finite Kleinian groups.
We are presently working on the topology at infinity (Gromov boundary and Busemann functions) of coverings (cp. preprint submitted to Pacific J.) and on the dynamical interpretation of the critical exponent of quotients of Kleinian groups.

Altri partecipanti alla ricerca

Marc Peigne	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Francoise Dal'bo	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

Laboratoire de Mathematiques et Physique Theorique, Universite F. Rabelais Tours (Francia)
IRMAR, Universite de Rennes I (Francia)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Ergodic Theory and Dynamical Systems
Titolo : On the growth of quotients of Kleinian groups

Nome rivista o titolo libro o atti conferenza : Ergodic Theory and Dynamical Systems
Autore/i : F. Dal'Bo, M. Peigne, A. Sambusetti
Anno : 2011
Numero volume : 31, no. 3
Pagine da - a : 835-851
Doi : 10.1017/S0143385710000131
Nome rivista o titolo libro o atti conferenza : Journal Fur Die Reine Und Angewandte Mathematik
Titolo : Growth of nonuniform lattices in pinched negatively curved manifolds
Autore/i : F. Dal'bo, M. Peigne, J.C. Picaud, A. Sambusetti
Anno : 2009
Numero volume : no. 627
Pagine da - a : 31-52
Issn : 0075-4102
Doi : 10.1515/CRELLE.2009.010
Nome rivista o titolo libro o atti conferenza : Geometry and Topology
Titolo : Asymptotic properties of coverings in negative curvature
Autore/i : A. Sambusetti
Anno : 2008
Numero volume : 12, no.1
Pagine da - a : 617-637
Doi : 10.2140/gt.2008.12.617

MACROAREA : A

Monica Moroni

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Dipartimento : Matematica

Laboratory and numerical simulations of local winds in the atmospheric boundary laye

Simulazioni sperimentali e numeriche dei venti locali nello strato limite atmosferico

In the atmospheric boundary layer, under high pressure conditions and negligible geostrophic winds, problems associated with pollution are the most critical. In this situation local winds play a major role in the evaluation of the atmospheric dynamics at small scales and in dispersion processes. These winds originate as a result of non uniform heating of the soil, either when it is homogeneous, or in discontinuous terrain in the presence of sea and/or slopes. The three-dimensional non-hydrostatic meteorological model WRF has been used to perform Large Eddy Simulations of the flow and its evolution during the complete day-night cycle. The domain is assumed to be planar in the cross-flow direction and periodic lateral boundary conditions are imposed. The laboratory experiments are conducted in a thermally controlled water tank to simulate an initially stably stratified environment and an electric heater solidal with the bottom of the tank to reproduce the urban site. Image analysis techniques have been used to reconstruct the velocity fields, while temperatures are acquired by multiple thermocouple arrays. The high resolution of both the numerical and laboratory experiments allows a detailed characterization of both mean and turbulent properties of the flow circulation. Present numerical and laboratory results, normalized by similarity theory scaling parameters, compare well with literature data.

Altri partecipanti alla ricerca

Antonio Cenedese		SSD : ICAR/01 - Idraulica
Franco Catalano	Under 40	SSD : ICAR/01 - Idraulica
Serena Falasca	Under 40	SSD : ICAR/01 - Idraulica
Marco Giorgilli	Under 40	SSD : ICAR/01 - Idraulica

Antonio Cenedese		SSD : ICAR/01 - Idraulica
Luca Shindler	Under 40	SSD : ICAR/01 - Idraulica
Valentina Dore	Under 40	SSD : ICAR/01 - Idraulica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Heat Transfer Engineering
Titolo : Quantifying Mixing in Penetrative Convection Experiments
Autore/i : Dore Valentina, Moroni Moroni, Cenedese Antonio
Anno : 2010
Numero volume : 32(2)
Pagine da - a : 99-108
Nome rivista o titolo libro o atti conferenza : Experiments in Fluids
Titolo : Investigation of Penetrative Convection in Stratified Fluids Through 3D PTV
Autore/i : Dore Valentina, Moroni Moroni, Le Menach Martin, Cenedese Antonio
Anno : 2009
Numero volume : 47(4-5)
Pagine da - a : 811-825
Nome rivista o titolo libro o atti conferenza : Measurements Science and Technology
Titolo : Spatial¿temporal improvements of a two-frame particle-tracking algorithm
Autore/i : Shindler Luca, Moroni Moroni, Cenedese Antonio
Anno : 2010
Numero volume : 21
Doi : 10.1088/0957-0233/21/11/115401

MACROAREA : A

Carlo Marchioro

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Dipartimento : Matematica

Motion of a body immersed in an extended medium.

Moto di un corpo immerso in un mezzo esteso.

We have investigated three problems:
1)Mathematical models of viscous friction.
We study the motion of a body immersed in an infinitely extended background. We prove that for having a reasonable model of viscous friction we need a singular interaction body/medium. Assuming a hard-core interaction with a medium composed by a Knudsen gas, we prove the approach to a stationary state with a long memory effect due to recollisions. We extend the study to the motion of a sphere immersed in a Stokes fluid.
2)Point particles immersed in a Vlasov-Poisson fluid.
We have studied this problem in two and three dimension, proving the existence of the time evolution in spite of the singularity of the Coulomb interaction.
3) Random motion in random media.
We study the behavior of random walks in random media, possibly fluctuating in time,depending on the statistical correlation properties of the medium.

Altri partecipanti alla ricerca

Carlo Boldrighini	SSD : MAT/07 - Fisica matematica

Carlo Boldrighini		SSD : MAT/07 - Fisica matematica
Paolo Butta`		SSD : MAT/07 - Fisica matematica
Guido Cavallaro	Under 40	SSD : MAT/07 - Fisica matematica
Mario Pulvirenti		SSD : MAT/07 - Fisica matematica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ?
Communications in Mathematical Physics,
Titolo : Ornstein-Zernike Asymptotics for a General ³Two-Particle² Lattice Operator
Autore/i : C. Boldrighini, R. A. Minlos and A. Pellegrinotti
Anno : 2011
Numero volume : 305
Pagine da - a : Published online 27 May
Issn : 0010-3616
Nome rivista o titolo libro o atti conferenza : Commun. Math. Phys.
Titolo : Approach to equilibrium in a microscopic model of friction,
Autore/i : S.Caprino, C.Marchioro, M.Pulvirenti,
Anno : 2006
Numero volume : 264
Pagine da - a : 167-189
Issn : 0010-3616
Nome rivista o titolo libro o atti conferenza : Arch. Rat. Mech. Anal.
Titolo : The Cauchy problem for the 3-D Vlasov-Poisson system with point charges, 201, 1-26 (2011)
Autore/i : C.Marchioro, E.Miot, M.Pulvirenti,
Anno : 2011
Numero volume : 201
Pagine da - a : 1-26
Issn : 0003-9527

MACROAREA : A

Stefano Marchiafava

SSD : MAT/03 - Geometria
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Dipartimento : Matematica

QUATERNIONIC MANIFOLDS AND RELATED STRUCTURES

VARIETA' QUATERNIONALI E STRUTTURE COLLEGATE

The research, in collaboration with Romanian researchers, concerns manifolds and differentiable structures related to quaternionic geometries, possibly involving a special metric structure, and their twistorial aspects. A particular interest is devoted to the case when the manifold is quaternionic, i.e. it has a 1-integrable almost quaternionic structure. A quaternionic manifold is the base of an associated Twistor bundle, whose Twistor space is formed by the compatible complex structures in the tangent spaces and it is endowed with a natural complex structure. In the metric case, there are the quaternionic Kaehler (QK) manifolds, which are Riemannian manifolds with special holonomy group. Several interesting differential geometric structures interact in a quaternionic, possibly QK, manifold (projective, complex, symmetric, Einstein, CR, etc) and moreover such manifolds arise in some remarkable physical models (supergravity). Hence, recently, manifolds with quaternionic-like structures were intensively studied both by differential geometers and theoretical physicists.

The research, in collaboration with S. Ianus, L. Ornea, R. Pantilie, G.E. Vilcu consists in the characterization of relevant morphisms and submanifolds in the class of (para-)quaternionic manifolds.

Altri partecipanti alla ricerca

Liviu Ornea		SSD : MAT/03 - Geometria
Radu Pantilie		SSD : MAT/03 - Geometria
Stere Ianus		SSD : MAT/03 - Geometria
Gabriel Eduard Vilcu	Under 40	SSD : MAT/03 - Geometria

Partner della ricerca

Universita' di Bucarest, Facolta' di Matematica - Istituto di Matematica "S. Stoilow" dell'Accademia di Romania - Universita' Petrol-Gaze di Ploiesti, Romania

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Central European Journal of Mathematics
Titolo : PARAQUATERNIONIC CR-SUBMANIFOLDS OF PARAQUATERNIONIC KAEHLER MANIFOLDS AND SEMI-RIEMANNIAN SUBMERSIONS
Autore/i : Stere IANUS, Stefano MARCHIAFAVA, Gabriel Eduard VILCU
Anno : 2010
Numero volume : vol. 8
Pagine da - a : 735 - 753
Issn : 1644 - 3616
Doi : 10.2478/s11533-010-0048-x
Nome rivista o titolo libro o atti conferenza : Annali della Scuola Normale Superiore di Pisa, Classe di Scienze
Titolo : TWISTORIAL MAPS BETWEEN QUATERNIONIC MANIFOLDS
Autore/i : Stere IANUS, Stefano MARCHIAFAVA, Liviu ORNEA, Radu PANTILIE
Anno : 2010
Numero volume : Serie V, Vol. IX, Fasc. I (2010)
Pagine da - a : 47 - 67
Nome rivista o titolo libro o atti conferenza : Bulletin Mathématique de la Societé Mathématique de Roumanie
Titolo : TWISTORIAL MAPS BETWEEN (PARA)QUATERNIONIC PROJECTIVE SPACES
Autore/i : Stefano MARCHIAFAVA
Anno : 2009
Numero volume : Vol. 52(100)
Pagine da - a : 321 - 332
Issn : 1220 - 3874

MACROAREA : A

massimo grossi

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Dipartimento : Matematica

Existence of solutions in supercritical problems

Esistenza di soluzioni per problemi sopracritici

This project investigated the existence and behavior of solutions of nonlinear elliptic equation \Delta u + f (u) = 0. The "model" problem (which is also the most studied) concerns the case in which the growth of f is polynomial. However, in two-dimensional case, is also considered the exponential behavior. The main results of this research

concern the supercritical case, on which there is very little literature. Suitable assumptions on the operator (involving his Green's function), has established the existence of positive (and changing sign solutions of the original problem where f is a power with exponent very large. This area is still under investigation. Another interesting result to be mentioned concerns the nonexistence of solutions with many peaks for classical elliptic problems depending on a parameter in convex domains. This result can be seen as a generalization of the classical result of Gidas-Ni-Nirenberg to appropriate nonlinearity. Finally we quote the result of multiplicity and qualitative study of solutions in which the exponent of the power is close to 1. These solutions are "close" to suitable linear combinations of eigenfunctions of the Laplacian (extension of some results of E.N. Dancer and C.S. Lin).

Altri partecipanti alla ricerca

Francesca Gladiali Under 40 SSD : MAT/05 - Analisi matematica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Functional Analysis
Titolo : Nonexistence of multi-bubble solutions to some elliptic equations on convex domains
Autore/i : M. Grossi & F. Takahashi
Anno : 2010
Numero volume : 259
Pagine da - a : 904-917
Nome rivista o titolo libro o atti conferenza : Annali della Scuola Normale Superiore, Classe di Scienze
Titolo : On the shape of solutions of an asymptotically linear problem
Autore/i : M. Grossi
Anno : 2009
Numero volume : VIII
Pagine da - a : 429-449
Nome rivista o titolo libro o atti conferenza : Journal of Functional Analysis
Titolo : Radial solutions for the Brezis-Nirenberg problem involving large nonlinearities
Autore/i : M. Grossi
Anno : 2008
Numero volume : 250
Pagine da - a : 2995-3036.

MACROAREA : A

Adriana Garroni

SSD : MAT/05 - Analisi matematica
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Dipartimento : Matematica

Multiscale analysis of dislocations

Analisi multiscala delle dislocazioni nei cristalli

Plastic behaviour of crystals is related to the motion of individual line defects (dislocations). While there has been considerable progress in the related computational modeling, the large number of dislocations in a given specimen requires a multi-scale approach to understand collective behavior and the formation of complex stable configurations. Starting from classical (semi-discrete) variational models for dislocations we have studied their asymptotic behaviour (via Gamma convergence) under suitable scalings. The rigorous analysis that we have obtained gives interesting improvements (that may explain complex phenomena like dislocations walls or networks) of existing theories. In the mesoscopic scale, starting from a nonlocal phase-field model (Peierls-Nabarro), Cacace and Garroni deduce an anisotropic line-tension energy and show that this model creates microstructure. Conti Garroni and Muller develop a

robust multi-scale technique that is able to treat nonlocal phase-field models in the case of a singular kernel. Garroni, Leoni and Ponsiglione consider a scaling of a core radius model that forces homogenization of dislocations. In the (macroscopic) limit they obtain a gradient theory for plasticity where the plastic energy is dictated by the crystalline structure.

Altri partecipanti alla ricerca

Marcello Ponsiglione Under 40 SSD : MAT/05 - Analisi matematica

Partner della ricerca

California Institute of Technology (Prof. M. Ortiz)

University of Bonn (Prof. S. Muller, Prof. S. Conti)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ARCHIVE FOR RATIONAL MECHANICS AND ANALYSIS
Titolo : Singular kernels, multiscale decomposition of microstructure, and dislocation models
Autore/i : CONTI S and GARRONI A. and MULLER S
Anno : 2011
Numero volume : 199,
Pagine da - a : 779--819
Issn : 0003-9527
Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE EUROPEAN MATHEMATICAL SOCIETY
Titolo : Gradient theory for plasticity via homogenization of discrete dislocations
Autore/i : GARRONI A. and LEONI G and PONSIGLIONE M
Anno : 2010
Numero volume : 12,
Pagine da - a : 1231--1266
Issn : 1435-9855
Nome rivista o titolo libro o atti conferenza : INTERFACES AND FREE BOUNDARIES
Titolo : A multi-phase transition model for dislocations with interfacial microstructure
Autore/i : CACACE S and GARRONI A.
Anno : 2009
Numero volume : 11,
Pagine da - a : 291--316
Issn : 1463-9963

MACROAREA : A

Michele Emmer

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Dipartimento : Matematica

Mathematics, modern and contemporary art, architecture: their relationships

Matematica, arte moderna e contemporanea, architettura: loro relazioni

The research identified particularly meaningful moments in the
relationship between art and mathematics.
-the new ideas on space between the end of the Nineteenth Century and the
beginnings of the Twentieth, in particular, Russian futurism, Suprematims, Kandinsky, Itallian Futurism.
-Influence of topology on architecture and plastic art, starting from Max
Bill's 1949 manifest on concrete art, ("The Visual Mind" MIT Press and "The Visual

Mind 2", 2005, MIT Press, both edited by M. Emmer).
- developments of the idea of space in modern art and contemporary art.
The results of the research were presented to the MART (Modern Art Museum of Rovereto). Given the interest they generated among the board members and the scientific director, they resulted in the development of a major exhibition on the topic ?Mathematics and Modern and contemporary art? to be held at the Museum between November 2012 and May 2013. In addition, a scientific conference on art and mathematics will be hosted by the museum. Both the conference and the exhibition will be financially supported entirely by the MART. Scientific Commeettee: Gabriella Belli, director MART, Linda Henderson, Texas University, Michael Rottman,
Berlin University, Umberto Bottazzioni, Università Milano, Michele Emmer.

Partner della ricerca
MART, Museo di Arte Moderna di Rovereto

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Visibili Armonie: arte cinema teatro matematica
Autore/i : Michele Emmer
Anno : 2007
Isbn : 8833917290
Nome rivista o titolo libro o atti conferenza : "Applications of Mathematics in Models, Artificial Neural Networks and Arts" V. Capecchi, M. Buscema, P. Contucci, B. D'Amore, eds
Titolo : The Idea of Space in Art, Technology and Mathematics
Autore/i : michele Emmer
Anno : 2010
Pagine da - a : 505-518
Isbn : 9789048185801
Nome rivista o titolo libro o atti conferenza : Bolle di sapone tra arte e matematica
Titolo : Premio letterario Viareggio per la saggistica 2010
Autore/i : Michele Emmer
Anno : 2009
Isbn : 9788833920238

MACROAREA : A
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Under 40
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Dipartimento : Matematica
Integrable Hamiltonian systems from an algebraic point of view
Sistemi Hamiltoniani integrabili da un punto di vista algebrico
The notion of Poisson vertex algebra is obtained as a formal Fourier transform of a local Poisson bracket (or a Hamiltonian operator), which plays an important role in the theory of infinite-dimensional integrable Hamiltonian systems. In our research we lay down the foundations of the theory of Poisson vertex algebras aimed at its applications to Hamiltonian equations and their integrability. In a sequence of papers starting in the early 70's scalar Hamiltonian operators were classified up to order 5. In a recent paper we classify Poisson vertex algebras in one differential variable (= scalar Hamiltonian operators) up to order 13, and we propose a conjectural classification for every order. Integrability of a byHamiltonian system is usually achieved by the so called Lenard-Magri scheme, whose validity can be established if one has some precise information on the corresponding 1st variational Poisson cohomology. In some

recent publications we compute the variational Poisson cohomology for any quasiconstant coefficients Hamiltonian operator. We prove that this cohomology is isomorphic to the Lie superalgebra of Hamiltonian vector fields over a Grassman algebra. We also prove that the ``essential'' subalgebra, consisting of classes vanishing on the Casimir elements, is zero.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : TRANSFORMATION GROUPS
Titolo : On classification of Poisson vertex algebras
Autore/i : DE SOLE A. and KAC V and WAKIMOTO M
Anno : 2010
Numero volume : 15,
Pagine da - a : 883--907
Issn : 1083-4362
Doi : 10.1007/s00031-010-9110-9
Nome rivista o titolo libro o atti conferenza : JAPANESE JOURNAL OF MATHEMATICS. NEW SERIES
Titolo : Poisson vertex algebras in the theory of Hamiltonian equations
Autore/i : BARAKAT A and DE SOLE A. and KAC V
Anno : 2009
Numero volume : 4,
Pagine da - a : 141--252
Issn : 0289-2316
Doi : 10.1007/s11537-009-0932-y
Nome rivista o titolo libro o atti conferenza : COMMUNICATIONS IN MATHEMATICAL PHYSICS
Titolo : Lie conformal algebra cohomology and the variational complex
Autore/i : DE SOLE A. and KAC V
Anno : 2009
Numero volume : 292,
Pagine da - a : 667--719
Issn : 0010-3616
Doi : 10.1007/s00220-009-0886-1

MACROAREA : A

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Dipartimento : Matematica

Boltzmann Grad Limit for the 2D Periodic Lorentz Gas.

Limite di Boltzmann Grad per il Gas di Lorentz periodico in dimensione 2.

The Lorentz gas consists of a single point particle bouncing in a fixed system of spherical obstacles. The collisions are elastic, and the particle is subject to no external force between collisions, so that the particle moves at constant speed. In the Boltzmann Grad the radius of the obstacles vanish and the density of the obstacles diverge in such a way that the mean free path stays constant.

In the case of a random (Poisson) distribution of obstacles the limit is described by a linear Boltzmann equation for the phase space density (G. Gallavotti in 1972).

In the periodic case the situation is complicated by the fact that the periodicity of the lattice introduces correlations between successive collisions.

In this case, in 2 space dimensions, we have shown that the collision times are not exponentially distributed and that the

impact parameters of successive collisions are not indipendent. The limiting behavior is described by a kinetic equation for a density distribution in an extended phase space which includes position, velocity and two additional variables: the time to the next (or last) collision and the impact parameter of the last collision.
The same equations has been derived indipendentely by J. Marklof and A. Strombergsson and by V.A. Bykovskii and A.V. Ustinov.

Altri partecipanti alla ricerca

Francois Golse SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF STATISTICAL PHYSICS
Titolo : On the Boltzmann-Grad limit for the two dimensional periodic Lorentz gas
Autore/i : CAGLIOTI E. and GOLSE F
Anno : 2010
Numero volume : 141, 2
Pagine da - a : 264--317
Issn : 0022-4715
Nome rivista o titolo libro o atti conferenza : COMPTES RENDUS MATHEMATIQUES DE L'ACADEMIE DES SCIENCES
Titolo : The Boltzmann-Grad limit of the periodic Lorentz gas in two space dimensions
Autore/i : CAGLIOTI E. and GOLSE F
Anno : 2008
Numero volume : 346 (7-8)
Pagine da - a : 477--482
Issn : 0706-1994

MACROAREA : A

Silvano Mignardi

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Dipartimento : Scienze della terra

Minerals for safe management and long-term disposal of carbon dioxide, Mg-rich wastewater and toxic metals
Il ruolo chiave dei minerali nella salvaguardia ambientale: sequestro della CO2, smaltimento di reflui industriali e immobilizzazione di metalli tossici

The objectives of this multi-faceted research were to investigate CO2 sequestration in mineral form via the synthesis of hydrated Mg carbonates in aqueous solutions as well as the effectiveness of phosphate minerals to remove toxic metals from polluted waters and soils.
A novel method to synthesize nesquehonite, MgCO3*3H2O, by reaction of a flux of CO2 with Mg-rich solutions has been developed to investigate the role of this carbonate in a "CO2-sequestering process" and disposing of Mg rich wastewater. The thermal and structural stability of nesquehonite up to 373 K suggest that carbonation via Mg-rich solutions at standard conditions represents a simple and permanent method of trapping CO2. At the same time, the removal of Pb, Cd, Cu, and Zn from polluted waters and soils by phosphate compounds was investigated both in single- and multi-metal systems. Toxic metals immobilization occurs through rapid surface complexation followed by partial dissolution of phosphate amendments and ion exchange with Ca, resulting in the formation of toxic metal-bearing phosphate minerals. Further research is going on for the implementation of this method in the field in order to develop an environmentally sound and cost effective toxic metals remediation technology.

Altri partecipanti alla ricerca

Caterina De Vito	SSD : GEO/09 - Georisorse minerarie e app. mineralogico-petrografiche...
Alessia Corami	SSD : GEO/09 - Georisorse minerarie e app. mineralogico-petrografiche...
Paolo Ballirano	SSD : GEO/06 - Mineralogia
Vincenzo Ferrini	SSD : GEO/09 - Georisorse minerarie e app. mineralogico-petrografiche...

Partner della ricerca

IGG-CNR, Unità Operativa di Roma

INFM-CNR OGG, European Syncrothron Radiation Facility, Grenoble, Francia

ENEL Produzione S.p.A. - Ricerca

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Colloid and Interface Science

Titolo : Cadmium removal from single- and multi-metal (Cd + Pb + Zn + Cu) solutions by sorption on hydroxyapatite

Autore/i : Alessia Corami, Silvano Mignardi, Vincenzo Ferrini

Anno : 2008

Numero volume : 317

Pagine da - a : 402-408

Issn : 0021-9797

Doi : 10.1016/j.jcis.2007.09.075

Nome rivista o titolo libro o atti conferenza : Journal of Hazardous Materials

Titolo : Copper and zinc decontamination from single- and binary-metal solutions using hydroxyapatite

Autore/i : Alessia Corami, Silvano Mignardi, Vincenzo Ferrini

Anno : 2007

Numero volume : 146

Pagine da - a : 164-170

Issn : 0304-3894

Doi : 10.1016/j.jhazmat.2006.12.003

Nome rivista o titolo libro o atti conferenza : Journal of Hazardous Materials

Titolo : Synthesis of nesquehonite by reaction of gaseous CO2 with Mg chloride solution: Its potential role in the sequestration of carbon dioxide

Autore/i : Vincenzo Ferrini, Caterina De Vito, Silvano Mignardi

Anno : 2009

Numero volume : 168

Pagine da - a : 832-837

Issn : 0304-3894

Doi : 10.1016/j.jhazmat.2009.02.103

MACROAREA : A

FERDINANDO BOSI

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Dipartimento : Scienze della terra

Crystal chemical constraints in the tourmaline-supergroup minerals

Vincoli cristallochimici nei minerali del supergruppo della tormalina

Tourmalines are the most widespread complex borosilicate minerals, very useful for understanding crustal evolution as well as desirable as a gemstone. For mineralogy, petrology, and geochemistry, 2011 could be known as the "Years of

the Tourmaline" with three significant series of papers covering a wide array of topics on this amazing mineral (Elements, 2011, April, 128). All these topics are related to the site allocation of atoms in the structure. Our research was addressed to the study of atomic ordering by exploring the relations between the bond lengths and site occupancies of different tourmalines and compared these with the ideal bond lengths calculated from bond-valence theory. We found that the observed bond lengths were close to the ideal values, though they covered a smaller range, indicating that the tourmaline structure lacks the flexibility to accommodate the full range of expected distances. This puts restrictions on type and amount of atoms that can occupy the octahedrally-coordinated sites of the structure. Such a finding was theoretically relevant, for example, in the new tourmaline nomenclature (American Mineralogist, 2011, 96, 895-913), which redefined both the main disordering relation and ideal end-member formulae of Alkali-subgroup 3 by our results

Altri partecipanti alla ricerca

SERGIO LUCCHESI SSD : GEO/06 - Mineralogia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CANADIAN MINERALOGIST
Titolo : Stereochemical constraints in tourmaline: from a short-range to a long-range structure
Autore/i : BOSI F.
Anno : 2011
Numero volume : 49,
Pagine da - a : 17--27
Issn : 0008-4476
Doi : 10.3749/canmin.49.1.17
Nome rivista o titolo libro o atti conferenza : AMERICAN MINERALOGIST
Titolo : Disordering of Fe2+ over octahedrally coordinated sites of tourmaline
Autore/i : BOSI F.
Anno : 2008
Numero volume : 93,
Pagine da - a : 1647--1653
Issn : 0003-004X
Doi : 10.2138/am.2008.2722
Nome rivista o titolo libro o atti conferenza : AMERICAN MINERALOGIST
Titolo : Crystal chemical relationships in the tourmaline group: Structural constraints on chemical variability
Autore/i : BOSI F. and LUCCHESI S
Anno : 2007
Numero volume : 92,
Pagine da - a : 1054--1063
Issn : 0003-004X
Doi : 10.2138/am.2007.2370

MACROAREA : A

Luca Aldega

Under 40
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Dipartimento : Scienze della terra

Reconstruction of burial and exhumation history of sedimentary successions in southern Apennines and Sicily by thermal and thermochronological analyses of organic and inorganic fraction of sediments

Ricostruzione della storia di seppellimento ed esumazione di successioni sedimentarie in Appennino Meridionale e Sicilia attraverso l'analisi termica e termocronologica della frazione organica ed inorganica dei sedimenti

The aim of the research was to define the thermal evolution and vertical movements of the main stratigraphic-structural units of southern Apennines and Sicily by the integration of different earth sciences disciplines and methodologies that converge into Basin Analysis. The investigation has provided new quantitative constraints to define the amount of sedimentary and tectonic burial and to constrain magnitudes and rates of orogenic shortening and exhumation. The approach dealt with a series of organic and inorganic thermal and thermochronological indicators obtained by X-ray diffraction, organic matter optical analysis, fluid inclusion microthermometry and apatite fission track analysis. One-dimensional thermal models were created by elaborating data from stratigraphic-structural, paleothermal, and thermochronological databases. Paleothermal features of sedimentary successions allowed to better define the geometric and kinematic characteristics of the fold-and-thrust belt in southern Italy and Sicily providing important contributions for industrial applications related to energy resources exploration and subordinately for a better environmental planning and management.

Partner della ricerca

Università di Camerino
Università di Catania
Università degli Studi di Napoli "Federico II"
Università degli Studi Roma Tre
C.N.R. - Istituto di Geoscienze e Georisorse

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Geological Society of America Bulletin
Titolo : Structural evolution of the sedimetary accretionary wedge of the alpine system in Eastern Sicily: thermal and thermochronological constraints.
Autore/i : CORRADO S., ALDEGA L., BALESTRIERI, M.L., MANISCALCO R. & GRASSO M.
Anno : 2009
Numero volume : 121
Pagine da - a : 1475-1490
Issn : 0016-7606
Nome rivista o titolo libro o atti conferenza : Journal of the Geological Society
Titolo : Testing the validity of organic and inorganic thermal indicators in different tectonic settings from continental subduction to collision: the case history of the Calabria-Lucania border (southern Apennines, Italy)
Autore/i : CORRADO S., INVERNIZZI C., ALDEGA L., D'ERRICO M., DI LEO P., MAZZOLI S., & ZATTIN M.
Anno : 2010
Numero volume : 167
Pagine da - a : 985-999
Issn : 0016-7649
Nome rivista o titolo libro o atti conferenza : Geology
Titolo : Tectonic burial and "young" (< 10 Ma) exhumation in the southern Apennines fold-and-thrust belt (Italy)
Autore/i : MAZZOLI S., D'ERRICO M., ALDEGA L., CORRADO S., INVERNIZZI C., SHINER, P. & ZATTIN M.
Anno : 2008
Numero volume : 36
Pagine da - a : 243-246
Issn : 0091-7613

MACROAREA : A

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DDynamic decision models under uncertainty

Modelli decisionali dinamici in condizioni di incertezza

In the latest years we propose new models to handle uncertainty by
starting from the de Finetti coherent probability theory.
We generalize this theory to dynamic decision models by
setting up a general model for dealing with uncertainty in
decision models under partial knowledge. This model is able to handle
simultaneously numerical precise and imprecise evaluations and qualitative
information.
Then, we introduce more restrictive forms
of conditional independence, we study the properties of the corresponding
independence models in order to give more efficient algorithms for the algebraic closure of the above independence models. This topic is particularly
relevant for the choice of a statistical model.
Moreover, we propose a re-reading of the so-called fuzzy arithmetic. We introduce fuzziness measures, similarity measures to be able to incorporate ¿vague¿ and ¿imprecise¿ information. Such measures are useful to detect fuzzy clustering and so can be applied in decision theory.
We face an other topic, that is the representability problem of preference on conditional acts by means of some functional based on
not-additive uncertainty measures. In such framework the aim is to provide
dynamic decision models and so to consider also the time as variable.

Altri partecipanti alla ricerca

giuseppe busanello Under 40 SSD : MAT/06 - Probabilita' e statistica matematica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF APPROXIMATE REASONING
Titolo : Acyclic directed graphs representing independence models.
Autore/i : BAIOLETTI Marco, BUSANELLO Giuseppe, VANTAGGI Barbara
Anno : 2011
Numero volume : 52
Pagine da - a : 2-18
Issn : 0888-613X
Nome rivista o titolo libro o atti conferenza : THEORY AND DECISION
Titolo : Preferences representable by a lower expectation: some characterizations.
Autore/i : CAPOTORTI Andrea, COLETTI Giulianella, VANTAGGI Barbara
Anno : 2008
Numero volume : 64
Pagine da - a : 119-146
Issn : 0040-5833
Nome rivista o titolo libro o atti conferenza : Mathematical social sciences

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF APPROXIMATE REASONING
Titolo : Incomplete preferences on conditional random variables: Representability by coherent conditional previsions.
Autore/i : VANTAGGI BARBARA
Anno : 2010
Numero volume : 60
Pagine da - a : 104-112
Issn : 0165-4896

MACROAREA : A

Agostino Prastaro
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Geometry of PDE's and Applications

Geometria di EDP e Applicazioni

The research contained in the quoted three papers follows the Prastaro's algebraic topology of PDE's in order to justify the generalized Poincare' conjectures for any dimension. In particular, in the first paper are utilized so-called ''exotic heat equations'' as generalized Ricci flow equations. In fact, by means of integral bordism groups of such PDE's we are able to characterize their global solutions. In particular it is shown that this theory allows us to prove that the Ricci flow equation for n-dimensional Riemannian manifolds, admits that starting from a n-dimensional sphere S^n, we can dynamically arrive, into a finite time, to any n-dimensional homotopy sphere M. When this is realized with a smooth solution, i.e., solution with characteristic flow without singular points, then $S^n\cong M$. The other homotopy spheres Σ^n, that are homeomorphic to S^n only, are reached by means of singular solutions. In the second paper, with the same methodolgies we prove also the smooth versions of the Poincar\'e conjecture (i.e., in dimension $n=4$). In the third paper above discussions are generalized in the category of quantum super manifolds. (Further generalizations are also published in the year 2011. (http://www.dmmm.uniroma1.it/~agostino.prastaro/PUBLICATIONS.HTM)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : arXiv - Cornell University - USA?
http://arxiv.org/abs/1009.1176
Titolo : Exotic heat PDE's. II
Autore/i : A. Prastaro
Anno : 2010
Numero volume : 1009.1176
Pagine da - a : 1-43
Nome rivista o titolo libro o atti conferenza : arXiv Cornell University - USA ?
http://arxiv.org/abs/1101.0283
Titolo : Exotic PDE's
Autore/i : A. Prastaro
Anno : 2010
Numero volume : 1101.0283
Pagine da - a : 1-51
Nome rivista o titolo libro o atti conferenza : Nonlinear Analysis. Theory Methods & Applications
Titolo : Surgery and bordism groups in quantum partial differential equations.I: The quantum Poincare' conjecture.
Autore/i : A. Prastaro
Anno : 2009
Numero volume : 71(12)

Nome rivista o titolo libro o atti conferenza : arXiv - Cornell University - USA?
http://arxiv.org/abs/1009.1176
Pagine da - a : 502-525
Issn : 0362-546X
Doi : http://www.sciencedirect.com/science/article/

MACROAREA : A

Francesca Pitolli
SSD : MAT/08 - Analisi numerica
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Dipartimento : Scienze di base e applicate per l'ingegneria

Neuroelectric source localizazion from combined EEG/MEG data

Localizzazione di sorgenti neuroelettriche attraverso misure combinate EEG/MEG

In recent years, magnetoencephalography (MEG) has gained an important role in the field of neuroscience research since it is completely noninvasive and has a high temporal resolution.
MEG aims at identifying the active area of the brain by localizing inner electric current sources through the measurements of the tiny magnetic field generated externally of the head by neuronal electric activity. On the other hand standard EEG recordings can be taken during MEG measurements. Both EEG and MEG can be seen as neuroimaging techniques in the sense that an image of the electric current distribution inside the brain can be recover from the EEG and/or MEG data. This requires to solve an highly ill-posed and ill-conditioned inverse problem.
The goal of the project is to construct efficient numerical methods to solve the EEG/MEG inverse problem. The first step is the solution of the forward problem. To this end we construct a Galerkin Boundary Element Method specially designed to solve the electromagnetic problem in the head. Then, the inverse problem is solved by assuming that the neuronal sources have a sparse representation in the spatial domain. This approach allows a better focusing of the brain active area, which is a fundamental requirement in functional neuroimaging.

Altri partecipanti alla ricerca

Luca Paulon	Under 40	SSD : MAT/08 - Analisi numerica
Gabriella Bretti	Under 40	SSD : MAT/08 - Analisi numerica
Cecilia Filardo	Under 40	SSD : MAT/08 - Analisi numerica

Partner della ricerca

Dipartimento di Neuroscienze ed Imaging, Univ. di Chieti-Pescara
Johann Radon Institute for Computational and Applied Mathematics (Austria)
Dipartimento di Matematica, Univ. di Genova

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Lectures Notes in Computer Science
Titolo : Neuroelectric current localization from combined EEG/MEG data
Autore/i : F. Pitolli
Anno : 2011
Numero volume : in stampa
Nome rivista o titolo libro o atti conferenza : Mathematical Methods for Curves and Surfaces
Titolo : An Iterative Algorithm with Joint Sparsity Constraints for Magnetic Tomography
Autore/i : F. Pitolli, G. Bretti
Anno : 2010
Pagine da - a : 316-328

Nome rivista o titolo libro o atti conferenza : Lectures Notes in Computer Science
Nome rivista o titolo libro o atti conferenza : Applied and Industrial Mathematics in Italy III
Titolo : An iterative thresholding algorithm for the neuronal current imaging
Autore/i : G. Bretti, F. Pitolli
Anno : 2010
Pagine da - a : 134-145

MACROAREA : A

Angela Pistoia

SSD : MAT/05 - Analisi matematica
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Dipartimento : Scienze di base e applicate per l'ingegneria

Nonlinear elliptic equations from physics and geometry Equazioni ellittiche non lineari dalla fisica e dalla geometria We investigate parameter dependent nonlinear elliptic partial differential equations and systems with variational structure. Special emphasis will be put on limiting or critical values of the parameter where one often observes concentration phenomena. In particular, we work on boundary value problems for equations with critical or almost critical nonlinearity where the exponent of the nonlinearity is taken as parameter, nonlinear Schrodinger type equations in the semiclassical limit, and competing systems of elliptic equations with competition parameter becoming unbounded. We also work on prescribed curvature type problems from conformal geometry where the somewhat hidden parameters come from scaling invariance due to the critical exponent involved.
We use a combination of PDE techniques, variational and topological methods, methods from bifurcation theory and dynamical systems, as well as numerical methods. An interesting feature is that we want to use computer assistance to give rigorous proofs in situations where analytical methods alone seem to be hopeless.

Altri partecipanti alla ricerca

Teresa D'Aprile	Under 40	SSD : MAT/05 - Analisi matematica
Giusi Vaira	Under 40	SSD : MAT/05 - Analisi matematica
Pierpaolo Esposito	Under 40	SSD : MAT/05 - Analisi matematica
Jerome Vetois	Under 40	SSD : MAT/05 - Analisi matematica

Partner della ricerca

Università degli Studi di Roma Tre
Justus Liebig University Giessen
Università degli Studi di Roma Tor Vergata
Université de Nice - Sophia Antipolis

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : COMMUNICATIONS IN MATHEMATICAL PHYSICS
Titolo : N-vortex equilibria for ideal fluids in bounded planar domains and N-solitons for the sinh-Poisson equation
Autore/i : BARTSCH T, PISTOIA A., WETH T
Anno : 2010
Numero volume : 3
Pagine da - a : da 653 a686
Issn : 0010-3616
Nome rivista o titolo libro o atti conferenza : COMMUNICATIONS IN PARTIAL DIFFERENTIAL EQUATIONS
Titolo : Nodal clustered solutions for some singularly perturbed Neumann problems
Autore/i : D'APRILE T, PISTOIA A.

Nome rivista o titolo libro o atti conferenza : COMMUNICATIONS IN MATHEMATICAL PHYSICS
Anno : 2010
Numero volume : 35
Pagine da - a : da 1355 a 1401
Issn : 0360-5302
Nome rivista o titolo libro o atti conferenza : CALCULUS OF VARIATIONS AND PARTIAL DIFFERENTIAL EQUATIONS
Titolo : The role of the scalar curvature in a nonlinear elliptic problem on Riemannian manifolds.
Autore/i : MICHELETTI A.M., PISTOIA A.
Anno : 2009
Numero volume : 34
Pagine da - a : da 233 a 265
Issn : 0944-2669

MACROAREA : A

Francesco Michelotti

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Dipartimento : Scienze di base e applicate per l'ingegneria

Novel photonic techniques and devices for label-free and disposable diagnostic Lab-on-chips Tecniche fotoniche e dispositivi innovativi per Lab-on-chip diagnostici integrati usa e getta di tipo label free The research aims at the development of a new generation of highly sensitive Lab-on-Chip biosensors based on silicon nitride and their application to label-free biomolecular multi-analyte detection. The biosensors are applied to the early detection of specific diseases, where improved early diagnosis enables more efficient treatment at a lower cost.
For this purpose an optical transduction mechanism is applied, that is an enhanced alternative to surface plasmon polaritons (SPP), currently used in surface Plasmon resonance (SPR) devices. It exploits the potential of Bloch surface waves (BSW) at the surface of photonic crystals (PC). The absence of damping in dielectrics (narrower resonances), the possibility to tailor the BSW dispersion at any wavelength, and the variety of dielectrics? surface chemistry lead to a superior sensing platform. The active surface is functionalized by appropriate molecular probes in order to guarantee selectivity. Application in the gas sensing is also pursued, using porous silicon for the PC fabrication (italian patent under PCT extension). The research is carried out in collaboration with national (Politecnico di Torino, Torino University- Inst. for Cancer Research and Treatment) and international (Fraunhofer Institute, Horiba Jobin Yvon) labs.

Altri partecipanti alla ricerca

Lorenzo Dominici	Under 40	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Fraunhofer Insitute for Applied Optics and Precision Engineering, Jena (D)
HORIBA Jobin Yvon (F)
Politecnico di Torino, Dipartimenti di Scienze dei Materiali e Chimica Industriale, F.Pirri
EPFL, H.-P.Herzig, T.Sfez

Brevetti

Dispositivo sensore di gas a struttura fotonica operante mediante onde di superficie di Bloch e relativo procedimento di fabbricazione (TO2009000866)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : NANO LETTERS
Titolo : Guided Bloch Surface Waves on ultra-thin polymeric ridges

Nome rivista o titolo libro o atti conferenza : NANO LETTERS
Autore/i : E. DESCROVI and T. SFEZ and M. QUAGLIO and D. BRUNAZZO and L. DOMINICI and MICHELOTTI F. and H.-P. HERZIG and O.J.F. MARTIN and F.GIORGIS
Anno : 2010
Numero volume : 10,
Pagine da - a : 2087--2091
Issn : 1530-6984
Doi : 10.1021/nl100481q
Nome rivista o titolo libro o atti conferenza : OPTICS EXPRESS
Titolo : Experimental determination of the sensitivity of Bloch surface wave based sensors
Autore/i : F. GIORGIS and E.DESCROVI and C.SUMMONTE and L.DOMINICI and MICHELOTTI F.
Anno : 2010
Numero volume : 18,
Pagine da - a : 8087--8093
Issn : 1094-4087
Doi : 10.1364/OE.18.008087
Nome rivista o titolo libro o atti conferenza : PHYSICAL CHEMISTRY CHEMICAL PHYSICS
Titolo : FAST OPTICAL VAPOUR SENSING BY BLOCH SURFACE WAVES ON POROUS SILICON MEMBRANES
Autore/i : MICHELOTTI F. and B.SCIACCA and L.DOMINICI and M.QUAGLIO and E.DESCROVI and F.GIORGIS and F.GEOBALDO
Anno : 2010
Numero volume : 12,
Pagine da - a : 502--506
Issn : 1463-9076
Doi : 10.1039/b914280k

MACROAREA : A

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Dipartimento : Scienze di base e applicate per l'ingegneria

Nonlinear Ellissometry to determine nonlinear optical coefficients of thin films

Metodo di ellissometria nonlineare per la determinazione di coefficienti ottici nonlineari di materiali a film sottile

We have proposed a method, based on the noncollinear second harmonic generation, to retrieve nonlinear optical coefficients of thin films, including information about the morphology of the material such as the orientation of its optical axis. The method works to evaluate the non-zero elements of the nonlinear optical susceptibility.At a fixed incidence angle, two pumping beams impinge on the material with a suitable angle among them and the second harmonic generated signal is systematically investigated by varying the polarization state of both fundamental beams. The resulting polarization charts allows to verify if Kleinman¿s symmetry rules can be applied to a given material or to retrieve the absolute value of the nonlinear optical tensor terms, from a reference measurement. The proposed method is particularly useful for those materials whose generated signal is strongly affected by sample rotation. The generated second harmonic polarization offer all the information to evaluate the ratio between the different non-zero elements of the nonlinear optical tensor of a given material. The method we have described is an alternative method to Maker fringes technique.

Altri partecipanti alla ricerca

Concita Sibilia	SSD : FIS/01 - Fisica sperimentale
Adriana Passaseo	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Maurizio Giardina	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

Selex-SI

CNR -Istituto di Nanoscienze

Brevetti

Fabio Antonio Bovino, Maurizio Giardina, Maria Cristina Larciprete, Concita Sibilia (2010) (WO/2010/113190) Method and system for determining second-order nonlinear optical coefficients

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Appl Phys Lett
Titolo : Evaluation of the optical axis tilt of zinc oxide films via noncollinear second harmonic generation
Autore/i : F A Bovino, M C Larciprete, A Belardini, C Sibilia
Anno : 2009
Numero volume : 94
Pagine da - a : 251109.
Doi : doi:10.1063/1.3158925
Nome rivista o titolo libro o atti conferenza : Optics Express
Titolo : Bound and free waves in non-collinear second harmonic generation
Autore/i : M C Larciprete, F A Bovino, A Belardini, C Sibilia, M Bertolotti
Anno : 2009
Numero volume : 17
Pagine da - a : 17000
Doi : 10.1364/OE.17.017000
Nome rivista o titolo libro o atti conferenza : Optics Lett
Titolo : Mapping the nonlinear optical susceptibility by noncollinear second-harmonic generation
Autore/i : M C Larciprete, F A Bovino, M Giardina, A Belardini, M Centini, C Sibilia, M Bertolotti, A Passaseo, V Tasco
Anno : 2009
Numero volume : 34
Pagine da - a : 19337
Doi : 10.1364/OE.17.019337

MACROAREA : A

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Integrated semiconductor twin photon source for quantum information processing

Sorgenti di coppie di fotoni a semiconduttore per applicazioni di informazione quantistica.

Our research activity was devoted to the study, design and fabrication of integrated, highly efficient twin photon sources both in the visible and in the near infrared by using semiconductor-based non linear photonic structures. One of the most exciting features is the possibility of controlling the spectrum of the Spontaneous parametric down conversion by enhancing the non linear process in the interested frequency range and suppressing the undesired frequencies. In this

way a ready to use source can be designed for a given application suppressing undesired noise and enhancing the performance of the sought pairs. We considered structures made of semiconductor materials as GaN (GaAs) and its compounds for applications in the visible (infrared) range. We designed photonic structures to enhance the nonlinear process and to control the properties of the emitted pairs in order to have a ready to use device that does not require further frequency filtering or alignment. Fabrication of samples and experimental verification of our results is part of our ongoing research. In the future, availability of this kind of sources of photon pairs will give an important contribution to the development of integrated quantum information technology from the lab to everyday life.

Altri partecipanti alla ricerca

Concita Sibilia	SSD : FIS/01 - Fisica sperimentale
Mario Bertolotti	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

Jan Perina Jr, Joint Laboratory of Optics of Palacky University and Institute of Physics of Academy of Sciences of the Czech Republic, Olomouc, Czech Republic

Michael Scalora, Charles M. Bowden Research Center, AMSRD-AMR-WS-ST, Research, Development, and Engineering Center, Redstone Arsenal, AL 35898-50003

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW A
Titolo : Photon-pair generation in random nonlinear layered structures
Autore/i : PERINA J and CENTINI M. and SIBILIA C and BERTOLOTTI M
Anno : 2009
Numero volume : 80,
Pagine da - a : 033844,
Issn : 1050-2947

Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW A
Titolo : Antisymmetric entangled two-photon states generated in nonlinear GaN/AlN photonic-band-gap structures
Autore/i : JAN PE INA and JR and CENTINI M. and CONCITA SIBILIA and MARIO BERTOLOTTI and MICHAEL SCALORA
Anno : 2007
Numero volume : 75,
Pagine da - a : 013805,
Issn : 1050-2947

Nome rivista o titolo libro o atti conferenza : PHYSICAL REVIEW A
Titolo : Properties of entangled photon pairs generated in one-dimensional nonlinear photonic-band-gap structures
Autore/i : JAN PERINA and JR and CENTINI M. and CONCITA SIBILIA and MARIO BERTOLOTTI and AND MICHAEL SCALORA
Anno : 2006
Issn : 1050-2947

MACROAREA : A

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Dipartimento : Scienze di base e applicate per l'ingegneria

Insulating Layers and Robin Problems on Koch Mixtures Strati isolanti e Problemi di Robin su misture di Koch

This paper deals with a reinforcement problem for a plane domain G with fractal boundary. As, from the point of view of the applications, the main interest is not in "regular" fractals but in irregular objects which exhibit some fractal properties, we consider a domain whose boundary is a deterministic or random "mixture" of self-similar Koch curves.
The fractal boundary of G is locally spatially homogeneous but it does not satisfy any exact scaling relation. It is generated by different families of Euclidean similarities operating in a deterministic or random way that mimics the influence of the environment. We construct suitable thin polygonal 2-dimensional fiber around pre-fractal approximating domains G_n and related suitable reinforced energy functionals. The aim of the research is to study the asymptotic behavior of the reinforced energy functionals while, simultaneously, the thickness of the fibers and the conductivity of the functionals on the fibers converges to 0 as n goes to infinity. We remark that the study of reinforcement problems on domains with fractal boundaries is recent and, to our knowledge, our approach to Robin Problems on fractal domains in the framework of insulating layers is new.

Altri partecipanti alla ricerca

Maria Agostina Vivaldi SSD : MAT/05 - Analisi matematica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Classification and Application of Fractals
Titolo : Trace Theorems on Scale Irregular Fractals
Autore/i : R.Capitanelli & M.A. Vivaldi
Anno : 2011
Isbn : 978-1-61209-967-5
Nome rivista o titolo libro o atti conferenza : Journal of Differential Equations
Titolo : Insulating layers and Robin Problems on Koch mixtures
Autore/i : R. Capitanelli & M.A. Vivaldi
Anno : 2011
Numero volume : 251
Pagine da - a : 1332-1353
Doi : doi:10.1016/j.jde.2011.02.003
Nome rivista o titolo libro o atti conferenza : Commun. Pure Appl. Anal.
Titolo : Robin boundary condition on scale irregular fractals
Autore/i : R. Capitanelli
Anno : 2010
Numero volume : 9
Pagine da - a : 1221--1234
Doi : doi: 10.3934/cpaa.2010.9.1221

MACROAREA : B

Cecilia Verga Falzacappa

Under 40
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Dipartimento : Biotecnologie cellulari ed ematologia

thyroid hormone T3: a novel molecule to protect pancreatic beta cell function

L'ormone tiroideo T3: una nuova molecola in grado di proteggere la funzionalità beta pancreatica

Thyroid disorders and diabetes mellitus are the two most common endocrinopathies encountered in practice. Both conditions frequently co-exist and the prevalence of thyroid dysfunction in patients with diabetes is higher than in the general population;however the molecular links between these two endocrine disorders have not been fully investigated.

Our previous results showed that T3 acts as a mitogenic factor, is able to counteract pharmacologic cell death in pancreatic beta cells and, that these effects are due to a direct activation of the PI3K/Akt signalling, which has been outlined as critical for beta cell. Moreover, T3 exerts the same mitogenic and protective effects in rat islets in culture, preserving integrity, vitality of the whole islets and, specifically the function of the beta cells within the islets. Therefore the T3 can preserve islets from both physiological and pharmacological death. In addition, our recent data demonstrate that administration of T3 to streptozotocin diabetic mice counteracts diabetes by preserving islets morphology, vitality and function, and assuring a normal response to oral glucose tolerance test. Our evidences propose thyroid hormone T3 as an antidiabetic factor, able to preserve and protect functional beta cell mass.

Altri partecipanti alla ricerca

Silvia Misiti SSD : MED/46 - Scienze tecniche di medicina e di laboratorio

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Cellular Biochemistry
Titolo : Verga Falzacappa C, Patriarca V, Bucci B, Michienzi S, Moriggi G, Stigliano A, Brunetti E, Toscano V and Misiti S
Autore/i : The TRb1 Is Essential in Mediating T3 Action on Akt Pathway in Human Pancreatic Insulinoma Cells
Anno : 2009
Numero volume : Apr 1;106(5)
Pagine da - a : 835-48
Doi : 10.1002/jcb.22045
Nome rivista o titolo libro o atti conferenza : ISLETS
Titolo : The thyroid hormone T3 improves function and survival of rat pancreatic islets during in vitro culture
Autore/i : 9. Verga Falzacappa C, Mangialardo C, Raffa S, Mancuso A, Piergrossi P, Moriggi G, Piro S, Stigliano A, Torrisi MR, Brunetti E, Toscano V and Misiti S
Anno : 2010
Numero volume : vol2, issue 2,
Pagine da - a : 96-103
Doi : 10.4161/isl.2.2.11170
Nome rivista o titolo libro o atti conferenza : PLoS ONE
Titolo : Thyroid hormone T3 counteracts STZ induced diabetes in mouse
Autore/i : Verga Falzacappa C, Mangialardo C, Madaro L, Raffa S, Ranieri D, Stigliano A, Brunetti E, Torrisi MR, Bouchè M, Toscano V and Misiti S
Anno : 2011
Numero volume : 6(5):e19839
Doi : 10.1371/journal.pone.0019839

MACROAREA : B

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Demethylation of non-CpG, CpC-rich, elements in the myogenin 5'-flanking region and their distribution in the mouse genome

Demetilazione di elementi non-CpG, ricchi in CpC, nella regione 5'-fiancheggiante del gene myogenin e loro distribuzione nel genoma di topo

Dynamic changes and structural patterns of DNA methylation involved in the transcriptional modulation, are poorly characterized. We analyzed, in C2C12 muscle satellite cells, embryonic muscle and embryonic brain, the DNA

methylation pattern of the 5'-flanking region of the myogenin gene, a positive regulator of muscle differentiation. We detected high levels of both CpG and non-CpG methylation in non-expressing conditions, that rapidly dropped with an active dynamics during myogenin transcriptional activation. Non-CpG demethylation spread from highly methylated short CpC-rich elements, which coincide with recognition sequences of differentiation transcription factors, and preceded CpG demethylation. A genomic search in 19667 mouse genes evidenced a high frequency of these elements close to the transcriptional start sites. Our findings point to a dynamically controlled equilibrium between CpG and non-CpG active demethylation in the transcriptional control of tissue-specific genes. The short CpC-rich elements are new structural features of the methylation machinery, that may prime the complete demethylation of transcriptionally crucial DNA regions. It is mandatory to assess the relevance of these findings in embryonic stem cells, since their high levels of non-CpG methylation.

Altri partecipanti alla ricerca

Silvia Pierandrei	Under 40	SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Roberto Strom		SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Giampiero Ferraguti		SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Andrea Fuso	Under 40	SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica

Brevetti

Metodo per la determinazione di mutazioni del gene della Fibrosi Cistica (brevetto nazionale N. 0001371810)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CELL CYCLE
Titolo : Early demethylation of non-CpG, CpC-rich, elements in the myogenin 5'-flanking region: a priming effect on the spreading of active demethylation?
Autore/i : FUSO A., FERRAGUTI G., GRANDONI F., RUGGERI R., SCARPA S., STROM R., LUCARELLI M.
Anno : 2010
Numero volume : 9,
Pagine da - a : 3965--3976
Issn : 1538-4101
Doi : 10.4161/cc.9.19.13193
Nome rivista o titolo libro o atti conferenza : ANALYTICAL BIOCHEMISTRY
Titolo : A reassessment of semiquantitative analytical procedures for DNA methylation: comparison of bisulfite- and HpaII polymerase-chain-reaction-based methods
Autore/i : FUSO A., SCARPA S., GRANDONI F., STROM R., LUCARELLI M.
Anno : 2006
Numero volume : 350,
Pagine da - a : 24--31
Issn : 0003-2697
Doi : doi:10.1016/j.ab.2005.12.008
Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF BIOLOGICAL CHEMISTRY
Titolo : The dynamics of myogenin site-specific demethylation is strongly correlated with its expression and with muscle differentiation
Autore/i : LUCARELLI M., FUSO A., STROM R., SCARPA S.
Anno : 2001
Numero volume : 276,
Pagine da - a : 7500--7506
Issn : 0021-9258

Nome rivista o titolo libro o atti conferenza : CELL CYCLE
Doi : 10.1074/jbc.M008234200

MACROAREA : B

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Role of IGF-binding proteins and other molecular markers in melanoma progression

Ruolo delle IGF-binding proteins e di altri marcatori molecolari nella progressione del melanoma

IGFPB-3 is the main carrier of circulating IGFs and the main modulator of their activity. IGFBP-3 controls the cellular availability of IGFs, which cannot exert its pro-proliferative activity while bound to IGFBP-3. The proteolysis of IGFBP-3 represent one way to control IGF release and the reduction of serum IGFBP-3 levels may represent a strategy whereby melanoma increases its metastatic potential ensuring a higher availability of IGFs.
The aim of our study was to evaluate the correlation between the IGFBP-3 serum level and melanoma stage. The study included 41 patients, 24 males and 17 females, with median age of 60 years(range 24-80), affected by cutaneous melanoma. Blood samples were taken from each patient and IGFBP-3 serum level was established using western blot analysis with commercial antibodies. The statistical analysis showed that full-size, glycosylated IGFBP-3 concentrations weresignificantly lower in sera of stage IV melanoma patients and that low serum level of IGFBP-3 correlate with both disease progression and presence of disease at the time of sample collection. In patients who underwent follow-up visits with further collections of blood samples, the concentrations of glyc

Altri partecipanti alla ricerca

STEFANO CALVIERI SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY
Titolo : CORRELATION BETWEEN INSULIN¿LIKE GROWTH FACTOR BINDING PROTEIN-3 SERUM LEVEL AND MELANOMA PROGRESSION
Autore/i : PANASITI V, NASPI A, DEVIRGILIIS V, CURZIO M, ROBERTI V, CURZIO G, GOBBI S, CALVIERI S, LONDEI P.
Anno : 2011
Numero volume : 64
Pagine da - a : 865-872
Issn : 0190-9622
Doi : 10.1016/j.jaad.2010.03.035

MACROAREA : B

Laura Amicone

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Identification and characterization of molecular epistatic circuitries controlling liver stem cell self-renewal and differentiation

Identificazione e caratterizzazione di circuiti molecolari epistatici che controllano il mantenimento e il differenziamento della cellula staminale epatica

We recently isolated and established in lines murine resident liver stem cells (RLSCs) with features distinct from other

previously described liver precursor/stem cells. RLSCs showed a metastable phenotype with a coexpression of epithelial and mesenchymal markers and a multidifferentiative potentiality (Conigliaro, 2008). Taking advantage of RLSCs we investigated on molecular mechanisms controlling the stem cell self-renewal and differentiation. We clarified as Wnt/beta-catenin signalling integrates cellular program influencing both stemness and hepatocytic differentiation. In particular, RLSCs were proven to spontaneously differentiate into periportal hepatocytes that, following Wnt pathway activation, switch into perivenular hepatocytes highlighting a direct convergence of this signaling on the HNF4a-driven transcription in the hepatocyte zonation(Colletti, 2009). Moreover, we unveiled an epistatic circuitry between the EMT master gene Snail and the hepatocyte master gene HNF4a, that is required during liver stem cell maintenance, hepatocyte differentiation and HCC progression. Moreover, we showed that in the context of the whole liver, HNF4a maintains the epithelial phenotype also through the active repression of the mesenchymal program (Santangelo, 2011).

Altri partecipanti alla ricerca

Marco Tripodi		SSD : BIO/13 - Biologia applicata
Carla Cicchini	Under 40	SSD : BIO/13 - Biologia applicata
Laura Santangelo	Under 40	SSD : BIO/13 - Biologia applicata
Alice Conigliaro	Under 40	SSD : BIO/13 - Biologia applicata

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : HEPATOLOGY
Titolo : The stable repression of mesenchymal program is required for hepatocyte identity: A novel role for hepatocyte nuclear factor 4alpha;
Autore/i : SANTANGELO L; MARCHETTI A; C. CICCHINI; CONIGLIARO A; CONTI B; MANCONE C; BONZO JA; GONZALEZ FJ; ALONZI T; AMICONE L; TRIPODI M.
Anno : 2011
Numero volume : Jun 53 (6)
Pagine da - a : 2063-74
Issn : 0270-9139
Nome rivista o titolo libro o atti conferenza : Cell Death And Differentiation
Titolo : Isolation and characterization of murine liver resident stem cell
Autore/i : Conigliaro A., Colletti M., Cicchini C., Guerra M.T., Manfredini R., Zini R., Bordoni V., Siepi F., Leopizzi M., Tripodi M. and L. Amicone.
Numero volume : Jan;15(1):I.F. 8.24
Pagine da - a : 123-33.
Issn : 1350-9047
Nome rivista o titolo libro o atti conferenza : Gastroenterology
Titolo : Convergence of Wnt signaling on the HNF4alpha-driven transcription in controlling liver zonation
Autore/i : Colletti M., Cicchini C., Conigliaro A., Santangelo L., Alonzi T. , Pasquini E., Tripodi M. and Amicone L.
Anno : 2009
Numero volume : Aug;137(2)
Pagine da - a : 660-72
Issn : 0892-1601

MACROAREA : B

Annabella Vitalone

Under 40
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Dipartimento : Fisiologia e farmacologia "Vittorio Erspamer"

Pharmacovigilance on herbal medicinal products.

Farmacovigilanza su prodotti a base di piante medicinali.

Aim: To describe suspected adverse reactions (ARs) associated with herbal products used for weight control. Method: Spontaneous reports are sent by hospital doctors, pharmacists, etc. to the Italian National Institute of Health, where all the forms are individually evaluated for the causality assessment, by specific algorithms. Results: 379 suspected ARs were collected, 46 of them concern weight loss products. Suspected ARs involved women (85%), and affected digestive system (17%), skin (17%), cardiovascular (26%) and central nervous system (17%), and liver (13%). 48% of ARs were serious and required hospitalization, among these 2 were life-threatening and 1 was a fatal event. The use of other therapies and concomitant conditions were reported in 52% and 22% of ARs, respectively. Some reactions were predictable in their nature and therefore avoidable. Conclusions: Natural health products are promoted to the public as less toxic than conventional drugs. This study could have a great impact on daily clinical practice, because of the knowledge of potential adverse effects of herbal products could lead to a reduction of the social cost related to medical visits, therapies, and could improve the awareness in the risk/benefit ratio associated with herbal dietary supplements.

Altri partecipanti alla ricerca

Gabriela Mazzanti	SSD : BIO/15 - Biologia farmaceutica
Fabio Firenzuoli	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Francesca Menniti-Ippolito	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Roberto Raschetti	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Paola Angela Moro	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

National Centre for Epidemiology, National Instituteof Health - Rome, Italy

Niguarda Ca' Grande Hospital, Poison Control Centre - Milan

Center of Natural Medicine and Department of Internal Medicine, S. Giuseppe Hospital, Az USL 11 - Empoli

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY

Titolo : SUSPECTED ADVERSE REACTIONS ASSOCIATED WITH HERBAL PRODUCTS USED FOR WEIGHT LOSS: A CASE SERIES REPORTED TO THE ITALIAN NATIONAL INSTITUTE OF HEALTH.

Autore/i : VITALONE A. and MENNITI-IPPOLITO F and MORO PA and FIRENZUOLI F and RASCHETTI R and MAZZANTI G

Anno : 2011

Numero volume : 67,

Pagine da - a : 215--224

Issn : 0031-6970

Doi : 10.1007/s00228-010-0981-4

Nome rivista o titolo libro o atti conferenza : JOURNAL OF ETHNOPHARMACOLOGY

Titolo : Chelidonium majus is not hepatotoxic in Wistar rats, in a 4 weeks feeding experiment.

Autore/i : MAZZANTI G and DI SOTTO A and FRANCHITTO A and MAMMOLA CL and MARIANI P and MASTRANGELO S and MENNITI-IPPOLITO F and VITALONE A.

Anno : 2009

Numero volume : 126,

Pagine da - a : 518--524

Issn : 0378-8741

Doi : 10.1016/j.jep.2009.09.004

Nome rivista o titolo libro o atti conferenza : DRUG SAFETY

Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY
Titolo : Surveillance of suspected adverse reactions to natural health products: the case of propolis.
Autore/i : MENNITI-IPPOLITO F and MAZZANTI G and VITALONE A. and FIRENZUOLI F and SANTUCCIO C
Anno : 2008
Numero volume : 31,
Pagine da - a : 419--423
Issn : 0114-5916

MACROAREA : B

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Role of the chemokine CX3CL1 in hippocampal neuronal transmission

Ruolo della chemochina CX3CL1 nella trasmissione neuronale ippocampale

It has been shown that many immune molecules may modulates central nervous system (CNS) function. Chemokines are a family of protein constitutively expressed in the brain where they modulates neurotransmitter release and ionic channels function. Fractalkine/CX3CL1 is a chemokine expressed in both neuron and glia being its specific receptor (CX3CR1) exclusively expressed on microglia. We investigated by electrophysiological, biochemical and morphological tools the role of CX3CL1 in hippocampal neuronal transmission. We demonstrated in acute mouse hippocampal slices that CX3CL1 impairs synaptic hippocampal glutamatergic transmission depressing the AMPA mediated excitatory postsynaptic current (EPSC) trough the reduction of Ser845 GluR1 phosphorylation. In addition, CX3CL1 impairs long-term hippocampal plasticity (LTP) trough phosphates and microglia-driven stimulation of the type 3 adenosine receptor (A3R) activity. The role of microglia in modulating neuronal functions was also demonstrated during development where mice lacking the CX3CR1 has a decreased density in microglia cells that are compromised in their capacity to engulf synaptic material leading to immature connectivity and augmented LTD. Overall, these findings link microglia surveillance to synaptic maturation and neuronal plasticity suggesting that deficits in microglia function may contribute to synaptic alterations seen in some neurodevelopmental disorders.

Partner della ricerca

Cornelius Gross
Bertil B. Fredholm

MACROAREA : B

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Nicotinic receptors and human pathologies

Recettori nicotinici e patologie umane

Muscle nicotinic acetylcholine receptors (AChR) are pentameric transmembrane proteins that relay excitation from neurones to muscle, and their dysfunction perturbs neuromuscular transmission, leading to myasthenic pathologies. In the last years, this laboratory studied the function of muscle AChR carrying mutations identified in patients with a form of congenital myasthenic syndrome that causes calcium overloading of the endplate.
Looking for new therapeutic options for the treatment of this rare pathology, we investigated the effects on AChR function of some drugs available for human use, focusing on mechanisms that affect Ca2+ influx through AChR-channel. So we study basic receptor function to devise treatments for rare diseases. Our latest results yielded proof of principle that

some compounds registered for human use may be beneficial for patients. We also set up an excitotoxicity assay as a model for these pathologies. Thanks to the funding by AFM, we shall continue to look for ways to control Ca2+ influx through the muscle AChR-channel in heterologous expression systems and possibly in also human myoblasts expressing mutant AChR, aiming at the identification of other clinically useful compounds.

Altri partecipanti alla ricerca

SERGIO FUCILE		SSD : BIO/09 - Fisiologia
Cristina Deflorio	Under 40	SSD : BIO/09 - Fisiologia
Claudia Moriconi	Under 40	SSD : BIO/09 - Fisiologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CELL CALCIUM
Titolo : Modulation of the Ca(2+) permeability of human endplate acetylcholine receptor-channel
Autore/i : PICCARI V and DEFLORIO C and BIGI R and GRASSI F. and FUCILE S
Anno : 2011
Numero volume : 49,
Pagine da - a : 272--278
Issn : 0143-4160
Doi : 10.1016/j.ceca.2011.03.002
Nome rivista o titolo libro o atti conferenza : JOURNAL OF NEUROCHEMISTRY
Titolo : Mechanism of verapamil action on wild type and slow channel mutant human muscle acetylcholine receptor
Autore/i : MORICONI C and DI CASTRO A and FUCILE S and EUSEBI F and GRASSI F.
Anno : 2010
Numero volume : 114,
Pagine da - a : 1231--1240
Issn : 0022-3042
Doi : 10.1111/j.1471-4159.2010.06842.x
Nome rivista o titolo libro o atti conferenza : JOURNAL OF GENERAL PHYSIOLOGY
Titolo : About a new method to measure fractional Ca2+ currents through ligand-gated ion channels
Autore/i : FUCILE S and GRASSI F.
Anno : 2009
Numero volume : 134,
Pagine da - a : 259--261
Issn : 0022-1295
Doi : 10.1085/jgp.200910222

MACROAREA : B

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Valutazione delle decisioni autogenerate nella corteccia del polo frontale

Evaluation of self-generated decisions in the frontal pole cortex

FPC (frontal pole cortex) is the most anterior part of the cerebral cortex and the largest area in the human prefrontal cortex, one that expanded dramatically during human evolution. In humans, its abnormal development might result in a variety of disorders such as autism spectrum disorders, attention deficit and hyperactivity disorder (ADHD), and schizophrenia.

In our first single cell recording study we used a strategy task to study FPC in comparison with dorsolateral and orbitofrontal cortex. In this task, the monkey selected one of two targets based on ?stay' or ?shift' cues. We found that neurons encoded only the monkey's decision about the goal selected (right vs. left) around feedback time. We also found that FPC cells did not encode the anticipation or delivery of reward when it served as a strategy cue indicating that the feedback activity seen later in the trial reflected the feedback conveyed by the fluid rather than its reward properties. Our results point to a role of FPC in monitoring and evaluating decisions, especially those with a self-generational component and the ability to link behavioral outcomes to particular classes of goals that produce them might be the cognitive advantage that drove the expansion of FPC in human evolution.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : TRENDS IN COGNITIVE SCIENCES
Titolo : The Frontal Pole Cortex: Encoding Ends at the End of the Endbrain.
Autore/i : TSUJIMOTO S and GENOVESIO A. and WISE S.P
Anno : 2011
Numero volume : 15,
Pagine da - a : 169--176
Issn : 1364-6613
Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF NEUROSCIENCE
Titolo : Comparison of strategy signals in the dorsolateral and orbital prefrontal cortex.
Autore/i : TSUJIMOTO S and GENOVESIO A. and WISE S.P
Anno : 2011
Numero volume : 31,
Pagine da - a : 4583--4592
Issn : 0270-6474
Nome rivista o titolo libro o atti conferenza : NATURE NEUROSCIENCE
Titolo : Evaluating self-generated decisions in frontal pole cortex of monkeys
Autore/i : TSUJIMOTO S and GENOVESIO A. and WISE SP
Anno : 2010
Numero volume : 13,
Pagine da - a : 120--U293
Issn : 1097-6256
Doi : 10.1038/nn.2453

MACROAREA : B

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Oleoylethanolamide: a new player in the "gut-brain" axis controlling appetite

Oleoiletanolamide: un nuovo elemento dell'asse "gut-brain" che regola l'appetito

The spread of "obesity epidemic" and the poor efficacy of many anti-obesity therapies highlight the need to identify novel mechanisms controlling energy intake. One such mechanism involves oleoylethanolamide (OEA), which is released by small-intestinal enterocytes during the absorption of dietary fat and induces satiety by engaging the nuclear receptor peroxisome proliferator-activated receptor-alpha (PPAR-alpha) and by activating sensory afferents of the vagus nerve. The central circuits mediating OEA effects on feeding were recently unveiled. In particular, by in situ hybridization and immunohistochemistry experiments in rats and mice, I showed that systemic injections of OEA (5-10 mg/kg, i.p.)

enhance the expression of the neuropeptide oxytocin in magnocellular neurons of the paraventricular and supraoptic nuclei of the hypothalamus. No such effect is observed with other neuropeptides, including vasopressin, TRH and POMC. The increase in oxytocin expression elicited by OEA was absent in mutant PPAR-alpha-null mice. Pharmacological blockade of oxytocin receptors in the brain by i.c.v. infusion of the oxytocin antagonist, L-368,899, prevented the satiety-inducing effects of OEA. These results suggest that OEA regulates feeding by activating central oxytocin transmission.

Altri partecipanti alla ricerca

Vincenzo Cuomo		SSD : BIO/14 - Farmacologia
Pasqua Dipasquale	Under 40	SSD : BIO/14 - Farmacologia

Partner della ricerca

Dr. JIN FU, UNIVERSITY OF CALIFORNIA, IRVINE, USA

Prof. DANIELE PIOMELLI, UNIVERSITY OF CALIFORNIA IRVINE and ITALIAN INSTITUTE OF TECHNOLOGY

Brevetti

COMBINATION THERAPY FOR CONTROLLING APPETITE. (Patent number: WO2004034968 A2)

COMPOUNDS, COMPOSITIONS AND THERAPEUTIC USES OF OLEOYLETHANOLAMIDE-LIKE COMPOUNDS AND MODULATORS OF PPARALPHA. (Patent number: WO2005002524)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF NEUROSCIENCE
Titolo : The fat-induced satiety factor OEA suppresses feeding through central release of oxytocin
Autore/i : GAETANI S., FU J, CASSANO T, DIPASQUALE P, ROMANO A, RIGHETTI L, CIANCI S, LACONCA L, GIANNINI E, SCACCIANOCE S, MAIRESSE J, CUOMO V, PIOMELLI D
Anno : 2010
Numero volume : 30
Pagine da - a : 8096-101
Issn : 0270-6474
Doi : 10.1523/JNEUROSCI.0036-10.2010

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF BIOLOGICAL CHEMISTRY
Titolo : Food intake regulates oleoylethanolamide formation and degradation in the proximal small intestine
Autore/i : FU J, ASTARITA G, GAETANI S., KIM J, CRAVATT BF, MACKIE K, PIOMELLI D
Anno : 2007
Numero volume : 282
Pagine da - a : 563-570
Issn : 0022-3565
Doi : 10.1124/jpet.106.105221

Nome rivista o titolo libro o atti conferenza : CELL METABOLISM
Titolo : The lipid messenger OEA links dietary fat intake to satiety
Autore/i : SCHWARTZ GJ, FU J, ASTARITA G, LI X, GAETANI S., CAMPOLONGO P, CUOMO V, PIOMELLI D
Anno : 2008
Numero volume : 8
Pagine da - a : 281-288
Issn : 1550-4131
Doi : 10.1016/j.cmet.2008.08.005

MACROAREA : B

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Homeostatic modulation, and funcional rescue of synaptic transmission and plasticity ecxrted by chemokine CX3CL1 constitutively expressed in the central nervous system

Modulazione omeostatica, e capacita' di recupero funzionale esercitata sulla trasmissione sinaptica dalla CX3CL1, una chemochina costitutivamente espressa nel sistema nervoso centrale

Chemokines are proteins that plays an important role in cell migration and intercellular communication. In the brain, chemokines are produced by neurons, astrocytes, microglia, meningeal and endothelial cell. Fractalkine/CX3CL1 is constitutively expressed in the CNS, In the CNS astrocytes, microglia, neurons, endothelial cells and cerebral microcirculation express a variety of chemokine receptors. We demonstrated that, besides the role in cell migration during development, the chemokine/receptor interaction play an important role in neuronal survival, neuron-glia interaction and adjustment of synaptic activity. These roles are important in both the homeostatic regulation of CNS and in pathological conditions when inflammation is relevant. We showed that CX3CL1 protects neurons in response to excitotoxic damage by glutamate and that this effect is mediated by the activation of adenosine (ADO) AR1 receptor. We demonstrated that CX3CL1 is able to reduce the efficacy of glutamatergic transmission in the hippocampus. Chemokine application modulates postsynaptic currents by reducing GluR1/Ser845 phosphorylation. Moreover CX3CL1, which receptor is only expressed on microglia, induces ADO release from microglia and exerts its neuromodulatory action through the activity of ADO receptors.

Altri partecipanti alla ricerca

Flavia Trettel SSD : BIO/09 - Fisiologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF NEUROSCIENCE
Titolo : Chemokine fractalkine/CX3CL1 negatively modulates active glutamatergic synapses in rat hippocampal neurons.
Autore/i : RAGOZZINO D and DI ANGELANTONIO S. and TRETTEL F and BERTOLLINI C and MAGGI L and GROSS C and CHARO IF and LIMATOLA C and EUSEBI F
Anno : 2006
Numero volume : 26(41)
Pagine da - a : 10488--10498
Issn : 0270-6474
Nome rivista o titolo libro o atti conferenza : JOURNAL OF NEUROIMMUNOLOGY
Titolo : CX3CL1-induced modulation at CA1 synapses reveals multiple mechanisms of EPSC modulation involving adenosine receptor subtypes.
Autore/i : PICCININ S and DI ANGELANTONIO S. and PICCIONI A and CRISTALLI G and FREDHOLM BB and LIMATOLA C and EUSEBI F and RAGOZZINO D
Anno : 2010
Numero volume : 224(1-2)
Pagine da - a : 85--92
Issn : 0165-5728
Doi : 10.1016/j.jneuroim.2010.05.012
Nome rivista o titolo libro o atti conferenza : JOURNAL OF IMMUNOLOGY
Titolo : Activity of Adenosine Receptors Type 1 Is Required for CX3CL1-Mediated Neuroprotection and

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF NEUROSCIENCE
Neuromodulation in Hippocampal Neurons.
Autore/i : LAURO C and DI ANGELANTONIO S. and CIPRIANI R and SOBRERO F and ANTONILLI L and BRUSADIN V and RAGOZZINO D and LIMATOLA C
Anno : 2008
Numero volume : 180(11)
Pagine da - a : 7590--7596
Issn : 0022-1767

MACROAREA : B

Vincenzo Cuomo

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The endocannabinoid system as a target for the development of innovative approaches for the treatment of psychiatric disorders

Il sistema endocannabinoide come target per lo sviluppo di approcci innovativi nel trattamento di disturbi psichiatrici

The thrust of our research is to study the biological mechanisms that regulate feeding and emotionality in rodents. In the past 5 years, we have investigated
the role of the endocannabinoid anandamide and its natural analogue oleoylethanolamide (OEA) in the modulation of feeding and emotionality. Our preclinical findings led to the identification of the anandamide hydrolysis inhibitor URB597 as a promising tool for the treatment of mood and anxiety
disorders. Furthermore, we have recently reported that the endocannabinoid system might be a key regulator of stress-coping behaviors by modulating not only the acute responses to emotional distress but also their elaboration at cognitive level. We finally explored the role of the endocannabinoid system in the pathophysiology of eating disorders, identifying OEA as a signal of across-meal satiety, which appears deregulated in woman suffering from eating disorders. Being OEA an endogenous ligand of PPAR-alpha receptors, key regulators of lipid
metabolism, our findings suggest that this molecule might lead to novel treatment for compulsive eating and obesity. Collectively, our results shed light on
how exogenous manipulation of the endocannabinoid system may provide innovative
approaches for for the treatment of psychiatric disorders.

Altri partecipanti alla ricerca

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Silvana Gaetani	Under 40	SSD : BIO/14 - Farmacologia

Partner della ricerca

PROF. DANIELE PIOMELLI, UNIVERSITY OF CALIFORNIA, IRVINE
PROF. JAMES McGAUGH, UNIVERSITY OF CALIFORNIA, IRVINE

Brevetti

Combination therapy for controlling appetite. (Patent number: WO2004034968 A2)
Compounds, compositions and therapeutic uses of oleoylethanolamide-like compounds and modulators of PPARalpha. (Patent number: WO2005002524)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Cell Metabolism
Titolo : The lipid messenger OEA links dietary fat intake to
satiety
Autore/i : Schwartz GJ, Fu J, Astarita G, Li X, Gaetani S, Campolongo P, Cuomo V, Piomelli D.
Anno : 2008
Numero volume : 8 (4)
Pagine da - a : 281-288
Nome rivista o titolo libro o atti conferenza : The Journal of Neuroscience
Titolo : The fat-induced satiety factor OEA suppresses feeding through central release of oxytocin
Autore/i : Gaetani S, Fu J, Cassano T, Dipasquale P, Romano A, Righetti L, Cianci S, Laconca L, Giannini E, Scaccianoce S, Mairesse J, Cuomo V.*, Piomelli D*. * CO-LAST AUTHORS
Anno : 2010
Numero volume : 30(24)
Pagine da - a : 8096-8101
Nome rivista o titolo libro o atti conferenza : Proc Natl Acad Sci U S A
Titolo : Endocannabinoids in the rat basolateral amygdala enhance memory consolidation and enable glucocorticoid modulation of memory
Autore/i : Campolongo P, Roozendaal B, Trezza V, Hauer D,
Schelling G, McGaugh JL, Cuomo V.
Anno : 2009
Numero volume : 106(12)
Pagine da - a : 4888-4893

MACROAREA : B

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Adenosine A1 receptors and microglial cells mediate CX3CL1-induced protection of hippocampal neurons against Glu-induced death.

Il recettore A1 dell'adenosina e le cellule microglali sono necessari all'azione neuroprotettiva mediata dalla chemochina fractalchina contro la morte indotta da Glutammato in neuroni ippocampali.

Cerebral excitotoxic insults are the consequence of impairment of local energy supply and represent the main cause of neuronal death during acute brain ischemia. Given the high social impact of this invalidating disease, the discover of new potential therapeutic routes is of great interest for design novel clinical strategies. Our research was focused on the neuroprotective potency of chemokine fractalkine/CX3CL1 against brain excitotoxicity. We found that CX3CL1 protects hippocampal neurons against glutamate-mediated excitotoxicity. In this research we deepen the mechanism of CX3CL1-mediated neuroprotection demonstrating for the first time that this chemokine, to exert this function, requires adenosine A1 receptors and microglial cells. CX3CL1 induces adenosine release from microglia underlying the importance of the cross-talk between the chemokine and the endogenous modulator adenosine. The relevance of these conclusions has been confirmed by in vivo studies on animal models of cerebral ischemia (in publication).

Altri partecipanti alla ricerca

CLOTILDE LAURO	Under 40	SSD : BIO/09 - Fisiologia

Brevetti

La Fractalchina, farmaco neuroprotettore contro la morte cellulare dovuta a processi eccitotossici, segnatamente ischemia cerebrale e lesioni midollari. RM2006A000353

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : NEUROPSYCHOPHARMACOLOGY
Titolo : Adenosine A1 receptors and microglial cells mediate CX3CL1-induced protection of hippocampal neurons against Glu-induced death.
Autore/i : C. LAURO; CIPRIANI R; CATALANO M; TRETTEL F; CHECE G; BRUSADIN V; ANTONILLI L; VAN ROOIJEN N; EUSEBI F; FREDHOLM BB; LIMATOLA C.
Anno : 2010
Numero volume : 35 (7)
Pagine da - a : 1550-1559
Doi : 10.1038/npp.2010.26
Nome rivista o titolo libro o atti conferenza : JOURNAL OF NEUROIMMUNOLOGY
Titolo : Chemokine CX3CL1 protects rat hippocampal neurons against glutamate-mediated excitotoxicity
Autore/i : LIMATOLA C and LAURO C and CATALANO M. and CIOTTI MT and BERTOLLINI C and S. DI ANGELANTONIO and RAGOZZINO D and EUSEBI F
Anno : 2005
Numero volume : 166(1-2)
Pagine da - a : 19--28
Issn : 0165-5728

MACROAREA : B

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Pharmacological interactions in emotional memory consolidation

Interazioni farmacologiche e modulazione del consolidamento della memoria di eventi a forte valenza emozionale

My research focuses on the role of the endocannabinoid system in the control of emotional behavior in rodents. Its clinical application and translational value are represented by the development of novel drugable targets to treat stress-related psychiatric disorders. The achieved results clearly demonstrate that endocannabinoids modulate the response to events that cause emotional distress. I have recently expanded this finding, by demonstrating that the cannabinoid system regulates also the memories of emotional events. Overall, my research suggests that the endocannabinoid system might be a key regulator of stress-coping behaviors modulating not only the acute response to emotional challenges but also their higher order cognitive integration. In the last few years my research has been focused to the neural mechanisms underlying the development of stress related disorders in ICU patients. I have discovered that ICU used sedative drugs, such as propofol, may enhance the consolidation of memory for traumatic events. Such discovery opens new horizons leading to new therapeutic approaches for the blockade of posttraumatic memory formation in ICU patients.

Partner della ricerca

Prof. Benno Roozendaal. University Medical Center of Groningen. The Netherlands
Prof. Gustav Schelling. Ludwig Maximilians University, Munich, Germany

Prof. Benno Roozendaal. University Medical Center of Groningen. The Netherlands
Prof. James McGaugh. Center for the Neurobiology of Learning and Memory. University of California-Irvine. USA
Dott.ssa Viviana Trezza. Università delgi Studi di RomaTre. Italy.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proc Natl Acad Sci U S A
Titolo : The fat-induced satiety factor OEA enhances memory consolidation
Autore/i : Campolongo P, Roozendaal B, Trezza V, Cuomo V, Astarita G, Fu J, McGaugh JL, Piomelli D.
Anno : 2009
Numero volume : 106(19)
Pagine da - a : 8027-31
Nome rivista o titolo libro o atti conferenza : Proc Natl Acad Sci U S A
Titolo : Endocannabinoids in the rat basolateral amygdala enhance memory consolidation and enable glucocorticoid modulation of memory
Autore/i : Campolongo P, Roozendaal B, Trezza V, Hauer D, Schelling G, McGaugh JL, Cuomo V.
Anno : 2009
Numero volume : 106
Pagine da - a : 4888-93
Nome rivista o titolo libro o atti conferenza : Anesthesiology
Titolo : Propofol enhances long-term memory formation via an interaction with the endocannabinoid system
Autore/i : Hauer D, Ratano P, Morena M, Briegel I, Scaccianoce S; Palmery M, Cuomo V, Roozendaal B, Schelling G, Campolongo P.
Anno : 2011
Numero volume : 114(6)
Pagine da - a : 1380-8

MACROAREA : B

Aldo Badiani

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Differential role of environnmental context in the preference for addictive drugs

Ruolo differenziale del contesto ambientale nella preferenza per le sostanze d'abuso

The publication of the psychomotor stimulant theory of addiction in 1987 and the demonstration that addictive drugs increase dopamine concentrations in the rat mesolimbic system in 1988 have led to a predominance of psychobiological theories that consider addiction to opiates (such as heroin) and to psychostimulants (such as cocaine) as essentially identical phenomena. Indeed, current theories of addiction: hedonic allostasis, incentive sensitization, aberrant learning, and fronto-striatal dysfunction, all argue for a unitary account of drug addiction. The findings of the present research, conducted in laboratory animals and humans, challenge this view. I will argue that heroin and cocaine reward are behaviorally and neurobiologically distinct and that the differences have important implications for addiction treatment, addiction theories, and future research.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Nature Reviews Neuroscience
Titolo : Opiate versus psychostimulant addiction: the differences do matter
Autore/i : BADIANI A., BELIN D, EPSTEIN D, CALU D, SHAHAM Y
Anno : 2011

Nome rivista o titolo libro o atti conferenza : Nature Reviews Neuroscience
Numero volume : 12
Pagine da - a : 1-16
Issn : 1471-003X
Nome rivista o titolo libro o atti conferenza : Psychopharmacology
Titolo : Drug context differently regulates cocaine versus heroin self-administration and cocaine- versus heroin-induced Fos mRNA expression in the rat
Autore/i : CELENTANO M, CAPRIOLI D, DI PASQUALE P, CARDILLO V, NENCINI P, GAETANI S, BADIANI A
Anno : 2009
Numero volume : 204
Pagine da - a : 349-360
Issn : 0033-3158
Doi : 10.1007/s00213-009-1467-x
Nome rivista o titolo libro o atti conferenza : Biological Psychiatry
Titolo : Ambience and Drug Choice: Cocaine- and Heroin-Taking as a Function of Environmental Context in Humans and Rats
Autore/i : CAPRIOLI D, CELENTANO M, DUBLA A, LUCANTONIO F, NENCINI P, BADIANI A
Anno : 2009
Numero volume : 65
Pagine da - a : 893-899
Issn : 0006-3223
Doi : 10.1016/j.biopsych.2008.12.009

MACROAREA : B

Alessandra Zingoni
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Dipartimento : Medicina molecolare

Killers and beyond: NK-cell-mediated control of adaptive immune responses

Le cellule Natural Killer nella modulazione della risposta immunitaria adattativa

Effective immunity requires coordinated activation of innate and adaptive immune responses. Natural killer (NK) cells are bone marrow-derived granular lymphocytes that have a crucial role in innate immune defense against viral and bacterial infections and malignancies. In addition to their effector role against pathogen and tumour, NK cells have also emerged as key modulator of T-cell mediated immune response. In this regard, we have shown that the antigenic activation of T lymphocytes is sufficient to induce surface expression of ligands for the NK activating receptors NKG2D and DNAM-1. We also discovered that expression of such ligands is related to cell division and dependent on DNA damage response and oxidative stress. Interestingly, in accordance with ligands expression, NK cells are able to recognize and kill more efficiently proliferating that non proliferating T lymphocytes with a mechanism requiring the cooperation between DNAM-1 and NKG2D. Our findings shed the light on an intriguing mechanism by which T cell responses could be modulated by NK cells and could contribute to improve novel therapeutic approaches in some pathological situations such as autoimmunity and Graft Versus Host Desease.

Altri partecipanti alla ricerca

Angela Santoni	SSD : MED/04 - Patologia generale
Cristina Cerboni	SSD : MED/04 - Patologia generale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Blood

Titolo : DNAM-1 ligand expression on Ag-stimulated T lymphocytes is mediated by ROS-dependent activation of DNA-damage response: relevance for NK-T cell interaction.

Autore/i : Ardolino M*, Zingoni A*^, Cerboni C, Cecere F, Soriani A, Iannitto ML, Santoni A.

*equal contribution, ^ corresponding author

Anno : 2011

Numero volume : 117

Pagine da - a : 4778-86

Issn : 1046-7408

Nome rivista o titolo libro o atti conferenza : Blood

Titolo : Antigen-activated human T lymphocytes express cell-surface NKG2D ligands via an ATM/ATR-dependent mechanism and become susceptible to autologous NK- cell lysis.

Autore/i : Cerboni C*, Zingoni A*^, Cippitelli M, Piccoli M, Frati L, Santoni A.

*equal contribution, ^ corresponding author

Anno : 2007

Numero volume : 110

Pagine da - a : 606-615

Issn : 1046-7408

Nome rivista o titolo libro o atti conferenza : Blood

Titolo : Detuning CD8+ T lymphocytes by down-regulation of the activating receptor NKG2D: role of NKG2D ligands released by activated T cells.

Autore/i : Cerboni C, Ardolino M, Santoni A, Zingoni A.

Anno : 2009

Numero volume : 113

Pagine da - a : 2955-2964

Issn : 1046-7408

MACROAREA : B

Claudio Conti

Under 40

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Dipartimento : Medicina molecolare

Scale-Free Optics

Ottica Senza Scala

Optical propagation is inherently bounded by the spatial scale imposed by the wavelength. This fixes fundamental limits to the resolution of imaging instruments.

Finding a way to overcome this limitation, from a fundamental approach, instead of using compensating techniques or image post-processing, may open unprecedented possibilities to improve existing microscopes or optical equipment, and for the next generation of materials for imaging and optical information processes.

We report on a fundamental discovery, in which a new material is shown to support a novel kind of optics, which is scale-free, where diffraction is totally cancelled by a characteristic response activated by bringing specifically designed disordered crystals out of thermal equilibrium.

We have experimentally demonstrated that a novel class of complex crystals may indeed totally cancel out the fundamental limits imposed by the wavelength, and constitute a class of meta-materials in which the known laws of refraction are largely modified and can be engineered by the thermal history of devices.

Our results supported by national (FIRB) and international (ERC) funding agencies, also in collaboration with industry, provide the basis for a novel generation of optical devices and imaging systems.

Altri partecipanti alla ricerca

Eugenio DelRe	Under 40	SSD : FIS/01 - Fisica sperimentale

Partner della ricerca

University of Jerusalem, Prof. A.J. Agranat

CRISEL Instruments S.r.l.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Nature Photonics

Titolo : Scale-free optics and diffractionless waves in nanodisordered ferroelectrics

Autore/i : Eugenio DelRe, Elisa Spinozzi, Rony Agranat, Claudio Conti

Anno : 2011

Numero volume : 5

Pagine da - a : 39-42

Issn : 1749-4885

Doi : 10.1038/nphoton.2010.2825

MACROAREA : B

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Paracrine properties of adult cardiac resident progenitor cells: screening, function and therapeutic contribution in cardiac cell therapy

Proprietà paracrine di cellule progenitrici cardiache adulte residenti: screening, funzione e contributo terapeutico nell'ambito della terapia cellulare cardiaca

Many biological mechanisms contribute to the efficacy of cardiac cell therapy: primarily direct regeneration from transplanted cells and paracrine enhancement of tissue preservation/repair. Resident adult cardiac progenitor cells (CPCs) are capable of direct cardiac regeneration, but its relative contribution to CPCs overall therapeutic effects was unknown. We screened by proteomics rat CPCs conditioned media (CM) and compared their secretome to that of neonatal myocytes (NMs). We identified CPC-specific paracrine proteins, defining a specific CPCs secretomic profile. Human CPC-CM exerted antiapoptotic activity on NMs and proangiogenic effects on endothelial cells. Then we investigated the relative contribution of indirect paracrine effects versus direct regeneration after human CPC intramyocardial injection in an infarcted immunodeficient mouse model. CPCs improved ventricular function, producing tissue regeneration and resilience. Based on the number of human cells contributing to capillary and myocyte density, direct differentiation accounted for 20-50% of the observed beneficial effects.

In conclusion, we demonstrated and quantified for the first time how CPCs, together with spontaneous cardiovascular regeneration, improve tissue resistance and repair after ischemic stress.

Altri partecipanti alla ricerca

Alessandro Giacomello	SSD : MED/04 - Patologia generale
Elisa Messina	SSD : MED/04 - Patologia generale
Eduardo Marban	SSD : MED/04 - Patologia generale

Alessandro Giacomello		SSD : MED/04 - Patologia generale
Jennifer Van Eyk		SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Rachel Ruckdeschel Smith	Under 40	SSD : MED/04 - Patologia generale
Miroslava Stastna	Under 40	SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Tao Sheng Li		SSD : MED/04 - Patologia generale
Gery Gerstenblith		SSD : MED/23 - Chirurgia cardiaca

Partner della ricerca

Cedars Sinai Heart Institute

Johns Hopkins University

Brevetti

CARDIAC STEM CELL AND MYOCYTE SECRETED PARACRINE FACTORS AND USES THEREOF (WIPO Patent Application WO/2009/061382)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : CIRCULATION RESEARCH

Titolo : Relative roles of direct regeneration versus paracrine effects of human cardiosphere-derived cells transplanted into infarcted mice

Autore/i : CHIMENTI I. and RUCKDESCHEL SMITH R and LI TAOSHENG and GERSTENBLITH G and MESSINA E and GIACOMELLO A and MARBAN E

Anno : 2010

Numero volume : 106(5)

Pagine da - a : 971--980

Issn : 0009-7330

Nome rivista o titolo libro o atti conferenza : PROTEOMICS

Titolo : Identification and functionality of proteomes secreted by rat cardiac stem cells and neonatal cardiomyocytes

Autore/i : MIROSLAVA S and CHIMENTI I. and MARBAN E and VAN EYK J

Anno : 2010

Numero volume : 10(2)

Pagine da - a : 245--253

Issn : 1615-9853

Nome rivista o titolo libro o atti conferenza : CIRCULATION (Proceeding of AHA Scientific Session 2009)

Titolo : Paracrine contribution versus direct regeneration in cardiosphere-derived cell therapy for acute myocardial infarctio

Autore/i : CHIMENTI I. and RUCKDESCHEL SMITH R and LI TS and MESSINA E and GIACOMELLO A and MARBAN E

Anno : 2009

Numero volume : 120(18)

Pagine da - a : S756

Issn : 0009-7322

MACROAREA : B

Giulio Caracciolo

Under 40

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Dipartimento : Medicina molecolare

Rational design of lipid-based nanocarriers for drug and gene delivery

Progettazione razionale di nanovettori lipidici per il drug e gene delivery

The impressive number (more than 2 million Europeans diagnosed with cancer every year) and cost (¿ 75-80 billion by 2012 as estimated by the Organization for Economic Co-operation and Development) of patients make cancer a medical, economic and social emergency to be urgently faced by EU. As a promising strategy for the treatment of cancer, gene therapy, which is defined as the genetic modification of cells for therapeutic benefit, continues to attract worldwide interest of researchers. Despite some generalities, a comprehensive understanding of the interactions between gene vectors and mammalian cells along the transfection pathway is still lacking. The ambitious but feasible aim of our research is to clarify the mechanisms of lipid-mediated transfection with an unprecedented level of accuracy. This knowledge will result in the rational design of innovative lipid nanocarriers for efficient gene delivery.

Altri partecipanti alla ricerca

Daniela Pozzi Under 40 SSD : FIS/07 - Fisica applicata (a beni culturali, ambientali, biologia e

Partner della ricerca

INDENA SPA

NOVARTIS PHARMA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MEDICINAL CHEMISTRY

Titolo : Factors determining the superior performance of Lipid Nanoparticles over Lipoplexes

Autore/i : CARACCIOLO G. and DANIELA POZZI and ANNA LAURA CAPRIOTTI and CARLOTTA MARIANECCI and MARIA CARAFA and CRISTINA MARCHINI and MAURA MONTANI and AUGUSTO AMICI and HEINZ AMENITSCH and MICHELLE A. DIGMAN and ENRICO GRATTON and SUSANA S. SANCHEZ and AND ALDO LAGAN??

Anno : 2011

Issn : 0022-2623

Nome rivista o titolo libro o atti conferenza : CANCER GENE THERAPY

Titolo : Role of temperature-independent lipoplex-cell membrane interactions in the efficiency boost of multicomponent lipoplexes

Autore/i : C. MARCHINI and M. MONTANI and C. ALFONSI and A. AMICI and M. A. DIGMAN and S. SANCHEZ and E. GRATTON and H. AMENITSCH and CARACCIOLO G. and D. POZZI

Anno : 2011

Issn : 0929-1903

Doi : 10.1038/cgt.2011.12

Nome rivista o titolo libro o atti conferenza : LANGMUIR

Titolo : Coupling between Lipoplex and Plasma Membrane Lipid composition: A Trojan Horse for Cell Entry?

Autore/i : C. MARCHINI and D. POZZI and C. ALFONSI and M. MONTANI and A. AMICI and H. AMENITSCH and CARACCIOLO G.

Anno : 2010

Numero volume : 26,

Pagine da - a : 13867--13873

Issn : 0743-7463

MACROAREA : B

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Identification of a "new" autoantigen in the antiphospholipid antibody syndrome

Identificazione di un "nuovo" autoantigene della sindrome da anticorpi ani-fosfolipidi

Antiphospholipid syndrome (APS) is an autoimmune disease characterized by arterial and venous thrombosis, recurrent abortions, and antiphospholipid antibodies (aPL). However, it is possible to find patients with clinical signs of APS who persistently test negative for aPL (SN-APS). The aim of this study was to identify new antigenic target(s) of autoantibodies in APS patients, which may also be recognized in SN-APS. We tested sera from patients with SN-APS with a proteomic approach by analyzing endothelial cell-surface membrane proteins. Sera from SN-APS patients revealed 2 reactive spots corresponding to vimentin, a protein that is shown to bind cardiolipin in vitro. Antivimentin/cardiolipin antibodies were tested. We observed that not only a large proportion of SN-APS patients but also almost all the APS patients displayed the presence of antivimentin/cardiolipin antibodies. To verify the possible pathogenic role of these autoantibodies, we demonstrated that antivimentin/cardiolipin antibodies induced IRAK phosphorylation and nuclear factor-kB activation in endothelial cells. Our results prompt to identify vimentin as a "new" cofactor for aPL, which may represent a useful tool in APS patients.

Altri partecipanti alla ricerca

Roberta Misasi	SSD : MED/04 - Patologia generale
Tina Garofalo	SSD : MED/04 - Patologia generale

Partner della ricerca

Istituto Superiore di Sanità

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Arthritis Rheum.
Titolo : Anti-beta2-glycoprotein I antibodies induce monocyte release of tumor necrosis factor alpha and tissue factor by signal transduction pathways involving lipid rafts.
Autore/i : Sorice M, Longo A, Capozzi A, Garofalo T, Misasi R, Alessandri C, Conti F, Buttari B, Riganò R, Ortona E, Valesini G.
Anno : 2007
Numero volume : 56
Pagine da - a : 2687-2697
Nome rivista o titolo libro o atti conferenza : Blood
Titolo : Vimentin/cardiolipin complex as a new antigenic target of the antiphospholipid syndrome.
Autore/i : Ortona E, Capozzi A, Colasanti T, Conti F, Alessandri C, Longo A, Garofalo T, Margutti P, Misasi R, Khamashta MA, Hughes GR, Valesini G, Sorice M.
Anno : 2010
Numero volume : 116
Pagine da - a : 2960-2967
Nome rivista o titolo libro o atti conferenza : Blood
Titolo : Advanced glycation end products of human {beta}2 glycoprotein I modulate the maturation and function of DCs.
Autore/i : Buttari B, Profumo E, Capozzi A, Facchiano F, Saso L, Sorice M, Riganò R.
Anno : 2011
Numero volume : 117

Nome rivista o titolo libro o atti conferenza : Arthritis Rheum.
Pagine da - a : 6152-6161

MACROAREA : B

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Gastrointestinal dysmotility in mitochondrial disorders is caused by mitochondrial DNA depletion

La dismotilità gastrointestinale nelle malattie mitocondriali è causata dalla deplezione del DNA mitocondriale

Chronic intestinal pseudo-obstruction (CIPO) is an increasingly recognized feature of mitochondrial disorders, such as mitochondrial neurogastrointestinal encephalomyopathy (MNGIE), a rare autosomal-recessive syndrome due to mutations in the thymidine phosphorylase gene (TYMP). MNGIE patients show elevated circulating levels of thymidine and accumulate somatic mitochondrial DNA (mtDNA) defects. Aim of this study was to clarify the molecular basis of CIPO in MNGIE. Using laser capture microdissection, we correlated the histopathological features with mtDNA defects in different tissues from the gastrointestinal wall of MNGIE patients and controls.
We found mtDNA depletion, mitochondrial proliferation, and smooth cell atrophy in the external layer of the muscularis propria of the small intestine of MNGIE patients. In controls, the lowest amounts of mtDNA were present at the same sites, as compared with other layers of the gastrointestinal wall. Similar features have been reproduced in another autosomal recessive syndrome due mutations in the catalytic subunit of mtDNA polymerase γ. Thus, the low baseline abundance of mtDNA molecules may predispose smooth muscle cells of the muscularis propria to mtDNA depletion and visceral myopathy.

Altri partecipanti alla ricerca

Giulia d'Amati		SSD : MED/08 - Anatomia patologica
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Valerio Carelli		SSD : MED/26 - Neurologia

Partner della ricerca

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Università Alma Mater di Bologna

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : NEUROLOGY
Titolo : FATAL CONGENITAL MYOPATHY AND GASTROINTESTINAL PSEUDO-OBSTRUCTION DUE TO POLG1 MUTATIONS
Autore/i : GIORDANO C. and POWELL H and LEOPIZZI M and DE CURTIS M and TRAVAGLINI C and SEBASTIANI M and GALLO P and TAYLOR RW and D'AMATI G
Anno : 2009
Numero volume : 72,
Pagine da - a : 1103--1105
Issn : 0028-3878
Doi : 10.1212/01.wnl.0000345002.47396.e1
Nome rivista o titolo libro o atti conferenza : AMERICAN JOURNAL OF PATHOLOGY
Titolo : Gastrointestinal dysmotility in mitochondrial neurogastrointestinal encephalomyopathy is caused by mitochondrial DNA depletion

Nome rivista o titolo libro o atti conferenza : NEUROLOGY
Autore/i : GIORDANO C. and SEBASTIANI M and DE GIORGIO R and TRAVAGLINI C and TANCREDI A and VALENTINO ML and BELLAN M and COSSARIZZA A and HIRANO M and D'AMATI G and CARELLI V
Anno : 2008
Numero volume : 173,
Pagine da - a : 1120--1128
Issn : 0002-9440
Doi : 10.2353/ajpath.2008.080252
Nome rivista o titolo libro o atti conferenza : GASTROENTEROLOGY
Titolo : Mitochondrial Neurogastrointestinal encephalomyopathy: Evidence of mitochondrial DNA depletion in the small intestine
Autore/i : GIORDANO C. and SEBASTIANI M and PLAZZI G and TRAVAGLINI C and SALE P and PINTI M and TANCREDI A and LIGUORI R and MONTAGNA P and BELLAN M and VALENTINO ML and COSSARIZZA A and HIRANO M and D'AMATI G and CARELLI V
Anno : 2006
Numero volume : 130,
Pagine da - a : 893--901
Issn : 0016-5085
Doi : 10.1053/j.gastro.2006.01.004

MACROAREA : B

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The what and how of observational learning

Cosa e come si apprende per osservazione?

By observation, it is possible to learn how to solve tasks and understand the relations between specific actions and outcomes. Observational learning involving processes of internal event generation functions as an externally guided form of mental imagery. Observation of an actor solving a task allows detecting divergences between the internal plan and the numerous strategies observed by storing and reproducing them in the exact serial order. We demonstrated that the modality of imitative learning is not limited to higher mammals, but it pertains to the functional properties of the motor system of lower mammals, suggesting that some basic mechanisms could be shared among species. The cerebellum makes possible to efficiently acquire competencies by observing actions performed by others and its role appears to be mainly linked to the acquisition of the procedural competencies of the task, in accordance with a similar role of cerebellar circuits in acquiring procedural knowledge in tasks actually performed. Conversely, the prefrontal networks appear to be primarily engaged in the declarative components of the task, in accordance with the well-known role of the frontal cortex in encoding and retrieval of the memory span and in visuo-spatial working memory.

Altri partecipanti alla ricerca

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Deny Menghini	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Giacomo Koch	Under 40	SSD : MED/26 - Neurologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF COGNITIVE NEUROSCIENCE

Titolo : THE WHAT AND HOW OF OBSERVATIONAL LEARNING

Autore/i : TORRIERO S and OLIVERI M and KOCH G and CALTAGIRONE C and PETROSINI L.

Anno : 2007, Numero volume : 19, Pagine da - a : 1656--1663

Issn : 0898-929X

Doi : 10.1162/jocn.2007.19.10.1656

Nome rivista o titolo libro o atti conferenza : NEUROSCIENTIST

Titolo : "Do what I do" and "do how I do": different components of imitative learning are mediated by different neural structures.

Autore/i : PETROSINI L., Anno : 2007, Numero volume : 13,

Pagine da - a : 335--348

Issn : 1073-8584

Doi : 10.1177/10738584070130040701

Nome rivista o titolo libro o atti conferenza : NEUROIMAGE

Titolo : Implicit learning deficits in dyslexic adults: an fMRI study.

Autore/i : MENGHINI D and HAGBERG GE and CALTAGIRONE C and PETROSINI L. and VICARI S

Anno : 2006, Numero volume : 33, Pagine da - a : 1218--26--1226

Issn : 1053-8119

Doi : 10.1016/j.neuroimage.2006.08.024

MACROAREA : B

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The sound of actions in apraxia.

Pazzaglia M, Pizzamiglio L, Pes E, Aglioti SM.

Curr Biol. 2008 Nov 25;18(22):1766-72.

Featured on the Cover, News &Views, Correspondent author

Il suono delle azioni

Vision and audition are telereceptive senses that process information received from near and distant external environments, on which the brain defines the self-other border and the surrounding social environment Perception and interaction with the world and other individuals might seem to be guided largely by vision, which according to classical views is more important than audition and commands at least in human and non-human primates, in most cross-modal and perceptuomotor interactions. However, our experience with the world is often inherently cross-modal. Here, we applied causative information to the auditory neural mapping of actions obtained from patients with apraxia to explore the neural underpinnings of auditory and visual action. We identified a somatotopic arrangement along the motor strip in the left hemisphere specifically associated with observing or hearing hand/mouth -related actions. Auditory stimuli that evoke actions activate their representation thus indicating that not only vision but other telereceptive senses might trigger the social mapping of actions, fairly independent of the other senses. In addition to audio-motor mapping for language being important, efficient mechanisms for matching audition with action may promote survival of all hearing individuals

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : The Journal of Neuroscience

Nome rivista o titolo libro o atti conferenza : The Journal of Neuroscience
Titolo : Neural Underpinnings of Gesture Discrimination in Patients with Limb Apraxia
Autore/i : Mariella Pazzaglia, Nicola Smania, Elisabetta Corato, and Salvatore Maria Aglioti
Anno : 2008
Numero volume : 28
Pagine da - a : 3030-3041
Issn : 0270-6474
Doi : 10.1523/JNEUROSCI.5748-07.2008
Nome rivista o titolo libro o atti conferenza : Trends in Cognitive Sciences
Titolo : Sounds and scents in (social) action.

Featured on the Cover
Autore/i : Agioti S and Pazzaglia M
Anno : 2011
Numero volume : 15
Pagine da - a : 47-55
Issn : 1364-6613
Doi : 10.1016/j.tics.2010.12.003
Nome rivista o titolo libro o atti conferenza : Neuron
Titolo : The neural basis of body form and body action agnosia..
Autore/i : Moro V; Urgesi C; Pernigo S; Lanteri P; Pazzaglia M; Aglioti SM.
Anno : 2008
Numero volume : 60
Pagine da - a : 235-46
Issn : 0896-6273
Doi : 10.1016/j.neuron.2008.09.022

MACROAREA : B

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5-Hydroxytryptophan during critical postnatal period improves cognitive performances and promotes dendritic spine maturation in genetic mouse model of phenylketonuria.

Il 5-idrossitriptofano durante un periodo critico postnatale migliora le capacità cognitive e promuove la maturazione delle spine dendritiche in un modello murino genetico di fenilchetonuria.

Phenylketonuria (PKU) is the most common genetic cause of mental retardation, but the cellular mechanisms underlying impaired brain function are still unclear. Using PAHenu2 mice (ENU2), mouse model of PKU, we demonstrated that high phenylalanine levels interfere with brain tryptophan hydroxylase activity by reducing the availability of serotonin (5-HT), crucial for maturation of neuronal connectivity in the prefrontal cortex (PFC), around the third postnatal week, a critical period for cortical maturation. 5-Hydroxytryptophan (5-HTP), the product of tryptophan hydroxylation, is known to be a better treatment to increase brain 5-HT levels. Thus we investigated the role of 5-HT during the early postnatal period in cognitive disturbances and in cortical dendritic alterations of PKU mice by restoring physiological brain levels of 5-HT in ENU2 through 5-HTP treatment. In adult ENU2 mice early 5-HTP treatment reverses cognitive deficits in spatial and object recognition tests and increases spine maturation of pyramidal neurons in the medial PFC. Our results suggest that mental retardation in PKU depends on reduced availability of brain 5-HT during critical developmental periods that interferes with cortical maturation and point to 5-HTP supplementation as a tool to heal PKU patients.

Partner della ricerca

TeleThon

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF NEUROPSYCHOPHARMACOLOGY
Titolo : 5-hydroxytryptophan during critical postnatal period improves cognitive performances and promotes dendritic spine maturation in genetic mouse model of phenylketonuria.
Autore/i : ANDOLINA D and CONVERSI D and S. CABIB and TRABALZA A and VENTURA R and PUGLISI-ALLEGRA S and PASCUCCI T.
Anno : 2010
Numero volume : 14,
Pagine da - a : 479--489
Issn : 1461-1457
Doi : 10.1017/S1461145710001288
Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF NEUROPSYCHOPHARMACOLOGY
Titolo : 5-Hydroxytryptophan rescues serotonin response to stress in prefrontal cortex of hyperphenylalaninaemic mice.
Autore/i : PASCUCCI T. and ANDOLINA D and MELA IL and CONVERSI D and LATAGLIATA C and VENTURA R and S. PUGLISI ALLEGRA and CABIB S
Anno : 2009
Numero volume : 12(8)
Pagine da - a : 1067--1079
Issn : 1461-1457
Doi : 10.1017/S1461145709990381
Nome rivista o titolo libro o atti conferenza : BRAIN RESEARCH
Titolo : Reduced availability of brain amines during critical phases of postnatal development in a genetic mouse model of cognitive delay.
Autore/i : PASCUCCI T. and ANDOLINA D and VENTURA R and S. PUGLISI ALLEGRA and CABIB S
Anno : 2008
Numero volume : 1217,
Pagine da - a : 232--238
Issn : 0006-8993
Doi : 10.1016/j.brainres.2008.04.006

MACROAREA : B

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Sequencing processing: a theory for understanding the cerebellar functioning

Elaborazione sequenziale: una teoria per interpretare la funzione cerebellare

The modular organization of the cerebellum and its multifarious domains of activity suggest that the cerebellar functioning specificity has to be searched in a processing mechanism that is applicable to various contexts. Our group addressed this issue by means neuropsychological and neurophysiological approaches. The obtained data converge in highlighting comparison of temporal and spatial information for sequence detecting as key stone of cerebellar functioning. This basic model of functioning is not linked to any singular modality of state estimation but intervenes whenever a feed-forward control is needed by identifying patterns that allow a response to be anticipated. We advance

that "sequence in" of sensory information is critical to understand cerebellar functioning. This aspect is substantial in addressing the cerebellar role in behaviour-related disorders, such as autism and schizophrenia, in which a possible deficit in recognizing foreseeable behaviours might explain the relationships between cerebellar processing and clinical symptoms.

Altri partecipanti alla ricerca

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Arturo Orsini SSD : M-PSI/03 - Psicometria

Partner della ricerca

IRCCS Fondazione Santa Lucia - Dr. Marco Molinari

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : BRAIN
Titolo : Cognitive sequencing impairment in patients with focal or atrophic cerebellar damage.
Autore/i : LEGGIO M.G. and TEDESCO A.M and CHIRICOZZI F.R and CLAUSI S and ORSINI A and MOLINARI M
Anno : 2008
Numero volume : 131,
Pagine da - a : 1332--1343
Issn : 0006-8950
Doi : 10.1093/brain/awn040
Nome rivista o titolo libro o atti conferenza : CEREBELLUM
Titolo : State Estimation, Response Prediction, and Cerebellar Sensory Processing for Behavioral Control.
Autore/i : MOLINARI M and RESTUCCIA D and LEGGIO M.G.
Anno : 2009
Numero volume : 8(3)
Pagine da - a : 399--402
Issn : 1473-4222
Doi : 10.1007/s12311-009-0112-x
Nome rivista o titolo libro o atti conferenza : BRAIN
Titolo : Cerebellar damage impairs detection of somatosensory input changes. A somatosensory mismatch-negativity study
Autore/i : RESTUCCIA D and DELLA MARCA G and VALERIANI M and LEGGIO M.G. and MOLINARI M
Anno : 2007
Numero volume : 130,
Pagine da - a : 276--287
Issn : 0006-8950
Doi : 10.1093/brain/awl236

MACROAREA : B

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The Electroencephalographic Fingerprint of Sleep Is
Genetically Determined: A Twin Study. Annals of Neurology 2008, 64: 455-460 I.F.=10.746
L'IMPRONTA ELETTROENCEFALOGRAFICA DEL SONNO E' DETERMINATA GENETICAMENTE:
Uno studio su gemelli. Annals of Neurology 2008, 64: 455-460 I.F.=10.746

Humans have an individual profile of the EEG oscillations in the 8-16 Hz frequency range during NREM sleep, stable

over time, resistant to experimental perturbations, and that discriminates individuals like a "fingerprint" [1-2]. This definition of a sleep phenotype makes essential the evaluation of an associated genotype. Here, we tested if this EEG fingerprint is genetically determined, by recording 40 monozygotic (MZ) and dizygotic (DZ) twins during their sleep. Because sleep need and intensity are homeostatically regulated, we also studied their sleep after 40 hours of prolonged wakefulness. While confirming the large phenotipic variability in the specific frequency range, we found higher Intra-Class Correlations (ICC) within MZ (ICC=0.93) than DZ pairs (ICC=0.46), that resulted in a heritability estimate of 96%. This heritability estimate is not influenced by the homeostatic sleep pressure. We have thus identified the 8-16 Hz EEG oscillations during sleep as one of the most heritable traits of human beings, opening the way for finding the associated genotypes.

1. Finelli, L. A. et al. 2001. Individual 'fingerprints' in human sleep EEG topography. Neuropsychopharmacology. 25: S57-62

2. De Gennaro, L. et al. 2005. An EEG fingerprint of human sleep. Neuroimage. 26, 114-22

Altri partecipanti alla ricerca

Alessandro Couyoumdjian	Under 40	SSD : M-PSI/01 - Psicologia generale
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Maria Concetta Pellicciari	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Giuseppe Curcio		SSD : M-PSI/01 - Psicologia generale
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Michela Ferrara		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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Partner della ricerca

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Computational Neurobiology Laboratory, The Salk Institute for Biological Studies, and Howard Hughes Medical Institute, La Jolla, CA

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IRCCS, Centro San Raffaele Pisana, Roma/Cassino

Neurology Clinic, University "Campus Biomedico", Rome, Italy

Department of Internal Medicine and Public Health, University of L'Aquila, L'Aquila

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Neuroimage (I.F.= 5.739)

Titolo : Neurophysiological correlates of sleepiness: a combined TMS and EEG study.

Autore/i : DE GENNARO L., MARZANO C., VENIERO D., MORONI F., FRATELLO F., CURCIO G., FERRARA M., FERLAZZO F., NOVELLI L., PELLICCIARI M.C., BERTINI M., ROSSINI P.M

Nome rivista o titolo libro o atti conferenza : Neuroimage (I.F.= 5.739)
Anno : 2007
Numero volume : 36
Pagine da - a : 1277-1287
Issn : 1053-8119
Doi : doi:10.1016/j.neuroimage.2007.04.013
Nome rivista o titolo libro o atti conferenza : Neuroimage (I.F.= 5.739)
Titolo : An individual fingerprint of human sleep.
Autore/i : DE GENNARO L., FERRARA M., VECCHIO F., CURCIO G. and BERTINI M.
Anno : 2005
Numero volume : 26
Pagine da - a : 114-122
Issn : 1053-8119
Doi : 10.1016/j.neuroimage.2005.01.020
Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF NEUROSCIENCE (I.F.= 7.271)
Titolo : HERITABILITY OF INTRACORTICAL INHIBITION
AND FACILITATION
Autore/i : PELLICCIARI M.C., VENIERO D., MARZANO C., MORONI F., PIRULLI C., CURCIO G., FERRARA M., MINIUSSI C., ROSSINI P.M. and DE GENNARO L.
Anno : 2009
Numero volume : 29
Pagine da - a : 8897-8900
Issn : 0270-6474
Doi : 10.1523/JNEUROSCI.2112-09.2009

MACROAREA : B

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COGNITIVE RESERVE: A FACTOR ABLE TO PREVENT COGNITIVE DECLINE

LA RISERVA COGNITIVO COME FATTORE PER PREVENIRE IL DECLINO COGNITIVO

The construct of cognitive reserve has been introduced to explain how individual responses may considerably vary in the presence of neurodegenerative changes similar in nature and extent. The correlation between cognitive reserve and complex experiences is consistent with the model of the environmental enrichment (EE). The EE-induced strengthening of neuronal connectivity provides the means through which the brain efficiently utilizes already existing networks and recruits alternative circuits. The effect of EE rearing was studied in an experimental model of Alzheimer Disease, based on the cholinergic depletion of basal forebrain, by analyzing cognitive functions and structural substrates linked to EE influence on neurodegenerative processes.

In the presence of cholinergic depletion, exposure to complex stimulations was able to attenuate cognitive decline by plastically remodelling cerebral circuitries and increasing synaptic neurotransmission.

The study offers a valuable contribution to discover possible factors that can make the life quality of patients more acceptable. The development of a cognitive reserve appears a reliable means to dampen cognitive decline in the presence of brain insult and even to potentiate cognitive function in the healthy aged subject.

Altri partecipanti alla ricerca

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Alzheimers Disease
Titolo : Environmental enrichment provides a cognitive reserve to be spent in the case of brain lesion.
Autore/i : Mandolesi L, De Bartolo P, Foti F, Gelfo F, Federico F, Leggio MG, Petrosini L.
Anno : 2008
Numero volume : 15(1)
Pagine da - a : 11-28
Nome rivista o titolo libro o atti conferenza : Neuroscience
Titolo : Environmental enrichment mitigates the effects of basal forebrain lesions on cognitive flexibility
Autore/i : De Bartolo P, Leggio MG, Mandolesi L, Foti F, Gelfo F, Ferlazzo F, Petrosini L.
Anno : 2008
Numero volume : 154(2)
Pagine da - a : 444-453
Nome rivista o titolo libro o atti conferenza : Brain Research Review
Titolo : On whether the environmental enrichment may provide cognitive and brain reserves.
Autore/i : Petrosini L, De Bartolo P, Foti F, Gelfo F, Cutuli D, Leggio MG, Mandolesi L.
Anno : 2009
Numero volume : 61(2)
Pagine da - a : 221-239

MACROAREA : B

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DeltaFosB accumulation in ventro-medial caudate underlies the induction but not the expression of behavioral sensitization by both repeated amphetamine and stress

L'accumulo della proteina DeltaFosB nello striato ventro-mediale è alla base dell'induzione ma non dell'espressione della sensibilizzazione comportamentale indotta sia dall'anfetamina che dallo stress

Both repeated psychostimulants and stress have the ability to promote behavioral sensitization, i.e. enhanced behavioral response to drug challenge. To test whether the behavioral phenotype is also accompanied by similar neuroplastic adaptations, the present study evaluated changes in Fos and FosB/DeltaFosB transcription factors induced in the brain of C57BL/6J mice behaviorally sensitized by repeated amphetamine or repeated restraint stress. Groups of mice received repeated injections of D-amphetamine or saline in group-specific environments. Different groups of mice experienced 2 h of restraint daily for 10 consecutive days. Amphetamine- pre-treated mice, drug-challenged in the environment in which they received drug treatments (Paired), as well as repeatedly stressed mice expressed robust sensitization to the locomotor effects of amphetamine. Both stress- and amphetamine-pre-treated groups showed changes in amphetamine-induced Fos expression; however, none of these changes was shared by the two sensitizing treatments. Instead, accumulation of FosB/DeltaFosB immunoreactivity in the ventro-medial caudate was common to both pre-treatments. These results support the hypothesis that a common neuroadaptive process involving DeltaFosB

accumulation in the ventro-medial caudate underlies the induction but not the expression of behavioral sensitization by different conditions.

Altri partecipanti alla ricerca

SIMONA CABIB SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF NEUROSCIENCE
Titolo : DeltaFosB accumulation in ventro-medial caudate underlies the induction but not the expression of behavioral sensitization by both repeated amphetamine and stress.
Autore/i : CONVERSI D. and BONITO-OLIVA A and ORSINI C and V. COLELLI and CABIB S
Anno : 2008
Numero volume : 27(1)
Pagine da - a : 191-201
Issn : 0953-816X
Doi : 10.1111/j.1460-9568.2007.06003.x
Nome rivista o titolo libro o atti conferenza : BEHAVIOURAL BRAIN RESEARCH
Titolo : Association between striatal accumulation of FosB/DeltaFosB and long-term psychomotor sensitization to amphetamine in mice depends on the genetic background
Autore/i : CONVERSI D and ORSINI C and COLELLI V and CRUCIANI F and CABIB S
Anno : 2010
Numero volume : 217(1)
Pagine da - a : 155-64
Issn : 1872-7549
Doi : 10.1016/j.bbr.2010.10.016
Nome rivista o titolo libro o atti conferenza : NEUROSCIENCE
Titolo : Habituation to the test cage influences amphetamine-induced locomotion and Fos expression and increases FosB/DeltaFosB-like immunoreactivity in mice
Autore/i : CONVERSI D. and BONITO-OLIVA A and ORSINI C and S. CABIB
Anno : 2006
Numero volume : 141(2)
Pagine da - a : 597-605
Issn : 0306-4522
Doi : 10.1016/j.neuroscience.2006.04.003

MACROAREA : B

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Personality Foundations of Ideological Divide: A Comparison of Women Members of Parliament and Women Voters in Italy

Le basi Personologiche della divisione politica: Un confronto tra donne parlamentari e donne elettrici in Italia

Empirical research is crucial for understanding the personality foundations of political preferences in modern democracies. However, few studies have addressed the personality of top politicians using standard methods to assess basic traits and personal values. In the current research, traits and values of 106 female members of the Italian

Parliament were assessed in accordance with the Five-Factor Model of personality and Schwartz¿s taxonomy. The same variables were measured in a sample of 864 voters taken from the general population. We investigate the extent to which differences in traits and values contribute to
ideological orientation of politicians and voters of rival coalitions. A similar pattern of relations was found in both groups. Yet, traits and values contributed to partisanship of politicians much more than to political preferences of voters. Whereas values fully mediated the contribution of traits to voting, energy/extraversion and agreeableness contributed to political partisanship both directly and indirectly, through values.

Altri partecipanti alla ricerca

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Michele Vecchione	Under 40	SSD : M-PSI/03 - Psicometria

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Political Psychology
Titolo : Personality and Politics: Values, Traits, and Political Choice
Autore/i : Caprara, G. V., Schwartz, S. H., Capanna, C., Vecchione, M., Barbaranelli, C.
Anno : 2006
Numero volume : 27
Pagine da - a : 1-28
Doi : 10.1111/j.1467-9221.2006.00447.x
Nome rivista o titolo libro o atti conferenza : Political Psychology
Titolo : Basic Personal Values, Core Political Values and Voting: A Longitudinal Analysis.
Autore/i : Schwartz, S. H., Caprara, G.V., Vecchione, M.
Anno : 2010
Numero volume : 31
Pagine da - a : 421-452
Doi : 10.1111/j.1467-9221.2010.00764.x
Nome rivista o titolo libro o atti conferenza : Journal of Personality and Social Psychology
Titolo : Personalities of politicians and voters: unique and synergistic relationships
Autore/i : Caprara, G.V., Barbaranelli, C., Consiglio, C., Picconi, L., & Zimbardo, P.
Anno : 2003
Numero volume : 71
Pagine da - a : 364-374

MACROAREA : B

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Neural representations of the identity of the body and of its action in visual and premotor cortices.
Rappresentazioni neurali dell' identità corporea e delle azioni del corpo nelle cortecce visive extrastriate e premotorie.

Recent neuroscientific studies indicate that the motor system is not only involved in movement execution but also in higher-order cognitive functions that are crucial for social interactions (e.g. perceiving the actions of other individuals).

Our research demonstrates that the motor system is engaged in the predictive simulation of others' motor behaviour and that this simulation is crucial for the discrimination of observed actions. Using repetitive transcranial magnetic stimulation, indeed, we transiently interfered with neural activity of bilateral premotor and exstrastriate visual brain regions and selectively impaired the ability to discriminate others' actions and others' body identity respectively. We showed that the activity of the premotor cortex is found to be essential only for the discrimination of actions that are part of the human repertoire and do not violate biomevhanically possible body kinematics. Moreover, we reported that abstract knowledge about others' motor skills is reflected in the activity of ones' own sensorimotor system. Our research paved the way to lesion studies showing that deficits in recognizing others' identity and actions are associated with selective posterior (visual) and frontal (premotor) brain lesions.

Altri partecipanti alla ricerca

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Partner della ricerca

IRCCS, Fondazione Santa Lucia, Roma

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Nature Neuroscience
Titolo : Representation of body identity and body actions in extrastriate body area and ventral premotor cortex.
Autore/i : Urgesi C, Candidi M, Ionta S, Aglioti SM
Anno : 2007
Numero volume : 10(1)
Pagine da - a : 30-31
Doi : 10.1038/nn1815
Nome rivista o titolo libro o atti conferenza : Cerebral Cortex
Titolo : Competing mechanisms for mapping action-related categorical knowledge and observed actions.
Autore/i : Candidi M, Vicario CM, Abreu AM, Aglioti SM
Anno : 2010
Numero volume : 20(12)
Pagine da - a : 2832-41
Doi : 10.1093/cercor/bhq033
Nome rivista o titolo libro o atti conferenza : Journal of Neuroscience
Titolo : Mapping Implied body actions in the human motor system.
Autore/i : Urgesi C, Moro V, Candidi M, Aglioti SM
Anno : 2006
Numero volume : 26(30)
Pagine da - a : 7942-7949
Doi : 10.1523/JNEUROSCI.1289-06.2006

MACROAREA : B

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Shared neural representations between self and others

RAPPRESENTAZIONI NEURALI CONDIVISE FRA SE' E GLI ALTRI

The different research lines revolve around the investigation of common neural circuits underlying self and other body representation, bodily sensations and actions. The first line investigates the plasticity of body representations, with a particular emphasis to integrative multisensory processing upon which body ownership and self-other distinction is based. She recently demonstrated that the experimental manipulation of multisensory signals that we use for body representation could alter our own face representation to include facial features of another person. The second is related to the study of the neural systems involved in sharing somatosensory representations among people. Specifically Ilaria Bufalari has demonstrated, for the first time, the existence of a common neural substrate in the primary somatosensory cortex enabling the direct match of other's somatic sensations (touch and pain). The third line investigates the existence of a common neural substrate for the perception and production of speech sounds. Indeed, she contributed to the first demonstration od the causal involvement of motor cortices in speech perception, beside production. These topics are investigated via the fruitful integration of neurophysiological techniques, personality and subjective measures.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Cereb Cortex
Titolo : Empathy for pain and touch in the human somatosensory cortex.
Autore/i : Bufalari I, Aprile T, Avenanti A, Di Russo F, Aglioti SM.
Anno : 2007
Numero volume : Nov;17(11)
Pagine da - a : 2553-61
Issn : 1460-2199
Doi : 10.1093/cercor/bhl161
Nome rivista o titolo libro o atti conferenza : Current Biology
Titolo : The motor somatotopy of speech perception.
Autore/i : D'Ausilio A, Pulvermüller F, Salmas P, Bufalari I, Begliomini C, Fadiga L.
Anno : 2009
Numero volume : Mar 10;19(5)
Pagine da - a : 381-5
Issn : 0960-9822
Doi : 10.1016/j.cub.2009.01.017
Nome rivista o titolo libro o atti conferenza : Social Neuroscience
Titolo : My face in yours: visuo- tactile facial stimulation influences sense of identity ¿
Autore/i : Sforza A.L., Bufalari I., Haggard P., Aglioti S.M.
Anno : 2010
Numero volume : Apr;5(2)
Pagine da - a : 148-62
Issn : 1747-0927
Doi : 10.1080/17470910903205503

MACROAREA : B

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PSYCHOLOGICAL DETERMINANTS OF DRIVING VIOLATIONS, ERROR AND LAPSES IN YOUNG DRIVERS.

DETERMINANTI PSICOLOGICHE ALLA BASE DEGLI ERRORI, DELLE DISTRAZIONI E DELLE VIOLAZIONI DEL

CODICE STRADALE NEI GIOVANI GUIDATORI

The research aimed to identify, in a national sample of young drivers (around 2000 high school students, driver licensed) specific risks factor for driving safety on the basis of combinations of self-reported personality traits (i.e., driving anger, anxiety, angry hostility, excitement-seeking, altruism, normlessness and driving locus of control), rest-activity habits, and decision making processes. High-risk driving behaviors were evaluated not only in terms of traffic rule violations and risk-taking behaviors, but also in terms of driving errors and lapses as measured by the Manchester Driver Behavior Questionnaire. Different easily interpretable driver subgroups were identified (risky drivers, worried drivers and careful drivers) that differed on self-reported accident involvement, attitudes toward traffic safety and risk perception, as well as on driving violations, errors, and lapses, sleep wake habits. Psychological factors influencing deliberate deviations from safe driving practices were differentiated from those influencing mistakes due to misjudgments or lapses in attention. Furthermore the effectiveness of different strategies to increase risks perception was evaluated. Interventions to promote safe driving in young drivers were proposed.

Altri partecipanti alla ricerca

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Partner della ricerca

POLIZIA STRADALE - MINISTERO DELL'INTERNO

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Accident Analysis and Prevention
Titolo : Sleep-related car crashes: Risk perception and decision-making processes in young drivers
Autore/i : F. Lucidi, P.M. Russo, L. Mallia, A. Devoto, M. Lauriola, C. Violani
Anno : 2006
Numero volume : 38
Pagine da - a : 302-309
Doi : 10.1016/j.aap.2005.09.013
Nome rivista o titolo libro o atti conferenza : ACCIDENT ANALYSIS & PREVENTION
Titolo : Young novice driver subtypes: Relationship to driving violations, errors and lapses.
Autore/i : Lucidi F., Giannini A.M., Sgalla R, Mallia L., Devoto A., Reichmann S.
Anno : 2010
Numero volume : 42 (6)
Pagine da - a : 1689-1696
Doi : 10.1016/j.aap.2010.04.008
Nome rivista o titolo libro o atti conferenza : ACCIDENTS: CAUSES, ANALYSIS AND PREVENTION
Titolo : Sleep-Related Car Crashes: Risk Perception and Coping with Sleepiness at the Wheel
Autore/i : Violani C, Lucidi F., Mallia L.
Anno : 2009
Isbn : 978-1-60741-712-5

MACROAREA : B

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Suicidal Ideation and Time Perspective in adolescence

Ideazione suicidaria e prospettiva temporale in adolescenza

Objectives: Many researches document the relevance of studying suicidal ideation among adolescents. However, research has given insufficient attention to the impact of time perspective on suicidal ideation: the study reported here examines this relationship in a large sample of adolescents. Study design: A cross-sectional study was conducted in a sample of 3.700 italian adolescents. Methods: We obtained data using a structured questionnaire concerning suicidal ideation, mental health status, self-esteem, time perspective, and individual and family characteristics. Data were analyzed using bivariate and multivariate analyses. Results: Overall, 9.2% of the sample reported severe suicidal ideation during the past two weeks; 7.6% reported moderate suicidal ideation. Female adolescents were more likely to report severe suicidal ideation than males. There were no differences about age and SES. A discriminant function analysis determinated time perspective dimensions and psychological correlates along which severe, moderate and nonideators differ. Conclusions: Differences in time perspective dimensions between moderate and severe ideators suggest that these groups should be considered and analyzed as two distinct groups in future research.

Altri partecipanti alla ricerca

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Mentoring USA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : European Psychiatry
Titolo : Suicidal Ideation and Time Perspective in High School Students.
Autore/i : Laghi F., Baiocco R., D?Alessio M., Gurrieri G.
Anno : 2009
Numero volume : 24
Pagine da - a : 41-46
Doi : 10.1016/j.eurpsy.2008.08.006

Nome rivista o titolo libro o atti conferenza : Social Indicators Research
Titolo : Attachment Representations and Time Perspective in Adolescence.
Autore/i : Laghi F., D?Alessio M., Pallini S., Baiocco R.
Anno : 2009
Numero volume : 90
Pagine da - a : 181-194
Doi : 10.1007/s11205-008-9249-0

Nome rivista o titolo libro o atti conferenza : Journal of Adolescence
Titolo : Decision-Making Style Among Adolescents: Relationship with Sensation Seeking and Locus of Control.
Autore/i : Baiocco R., Laghi F., D?Alessio M.
Anno : 2009
Numero volume : 32
Pagine da - a : 963-976
Doi : 10.1016/j.adolescence.2008.08.003

MACROAREA : B

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Psychological Distance and Global Thinking: Implications for Conflict Resolution

Distanza Psicologica e Pensiero Globale: Implicazioni per la Risoluzione dei Conflitti

Among the most pertinent questions pursued in psychological science is when and why people cooperate with others. To contribute to our understanding of the issue the role of psychological distance (PD) in shaping conflict behaviors was considered. Indeed, social dilemmas, negotiations, and broader social conflicts differ in the degree of PD that participants experience. Distance affects global thinking and consequently the way individuals construe objects, events, and other people. We studied whether and how this shift in the processing style promotes constructive conflict resolution. In the first set of experiments it was found that PD facilitates problem-solving and win-win agreements by inducing a focus on central (interests) rather than peripheral and subordinate features (issues) involved in the conflict.In another set of studies it was found that PD counteracts the detrimental effects of obstacles in conflict resolution by promoting creative and unconventional solutions. Boundary conditions of the influence of PD were also explored. It was found that pro-socials were more cooperative and pro-selves were more competitive under high rather than low PD. The present study revealed that PD substantially influence negotiator cognitions, behavioral tendencies, and outcomes

Altri partecipanti alla ricerca

Lucia Mannetti SSD : M-PSI/05 - Psicologia sociale

Partner della ricerca

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Personality and Social Psychology
Titolo : Now You See It, Now You Don¿t: Insterests, Issues and Psychological Distance in Integrative Negotiation.
Autore/i : Giacomantonio, M., De Dreu, C.K.W., Mannetti L.
Anno : 2010
Numero volume : 98
Pagine da - a : 761-774
Issn : 0022-3514

Nome rivista o titolo libro o atti conferenza : Journal of Experimental Social Psychology, 46, 824-829.
Titolo : Psychological Distance Boosts Value-Behavior Correspondence in Ultimatum Bargaining and Integrative Negotiation.
Autore/i : Giacomantonio, M., De Dreu, C.K.W., Sligte D., Shalvi S. & Leder, S.
Anno : 2010
Numero volume : 46
Pagine da - a : 824-829.
Issn : 0022-1031

Nome rivista o titolo libro o atti conferenza : Journal of Experimental Social Psychology
Titolo : Getting Stuck or Stepping Back: Effects of Obstacles in the Negotiation of Creative Solutions.
Autore/i : De Dreu C. K. W., Giacomantonio M.,Sligte D., and Shalvi S.
Anno : 2009

Nome rivista o titolo libro o atti conferenza : Journal of Personality and Social Psychology
Numero volume : 45
Pagine da - a : 542-548
Issn : 00221031
Doi : 10.1016/j.jesp.2009.01.001

MACROAREA : B

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Spatial function in presence of cerebellar alterations

La funzione spaziale in presenza di alterazioni cerebellari

Spatial navigation is a cognitive function that can be defined as a self-controlled movement in space toward a non-visible goal. This function requires the integration of both internal and external sensory?motor information. Spatial navigation requires at least two complementary processes: the organization of the spatial representation of the environment (declarative component) and the acquisition of a motor behavior adapted to the specific context (procedural component). Testing of several cerebellar animal models in spatial navigation tasks has suggested that the cerebellum has a role in mediating the procedural component of spatial navigation. The present study investigated the influence of a cerebellar lesion on rat exploratory activity in environments featured by different spatial distribution of multiple rewards. The findings demonstrate that the exploratory activity of the hemicerebellectomized animals significantly differed from that displayed by intact rats. Moreover, this study was aimed at evaluating spatial function in subjects with Williams syndrome (WS) by using the radial arm maze task. Just the alterations of the subcortical structures observed in WS subjects could explain the marked procedural impairmnet that characterizes threir cognitive profile.

Altri partecipanti alla ricerca

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Debora Cutuli	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Cerebellum
Titolo : Cerebellar damage loosens the strategic use of the spatial structure of the search space.
Autore/i : Foti F, Mandolesi L, Cutuli D, Laricchiuta D, De Bartolo P, Gelfo F, Petrosini L.
Anno : 2010
Numero volume : 9
Pagine da - a : 29-41
Doi : DOI 10.1007/s12311-009-0134-4
Nome rivista o titolo libro o atti conferenza : Journal of Neuroscience Research
Titolo : Features of sequential learning in hemicerebellectomized rats.
Autore/i : Mandolesi L, Foti F, Cutuli D, Laricchiuta D, Gelfo F, De Bartolo P, Petrosini L.
Anno : 2010

Nome rivista o titolo libro o atti conferenza : Cerebellum
Numero volume : 88
Pagine da - a : 478-486
Doi : 10.1002/jnr.22220
Nome rivista o titolo libro o atti conferenza : Int J Dev Neurosci
Titolo : Spatial competences in Williams syndrome: a radial arm maze study.
Autore/i : Mandolesi L, Addona F, Foti F, Menghini D, Petrosini L, Vicari S.
Anno : 2009
Numero volume : 27
Pagine da - a : 205-213
Doi : 10.1016/j.ijdevneu.2009.01.004

MACROAREA : B

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Environmental psychology, human behaviour and sustainable development

Psicologia ambientale, comportamento umano e sviluppo sostenibile

Understanding and changing human behaviour towards the environment, natural resources and biodiversity, is a priority item in the current scientific, political and economic agenda, at a global level.
Environmental and social psychological research has increasingly focused on the impact of daily human actions and lifestyles upon the quality of our living environments, by studying the individual and social determinants of environmentally friendly human actions in domains such as energy and water consumption, travel mode choices, household recycling, conservation of biodiversity, green space frequentation, etc.
In the present research, constructs and theories from the social psychological research tradition about human deliberate action, such as attitude-behaviour models, social influence and norms, social dilemmas and value orientations, were used to understand and predict individual attitudes and behaviour relevant to the environment (i.e., water consumption; household recycling; frequentation of urban green spaces), through a series of empirical studies conducted in Italy in the last decade. Results highlighted how social psychological research could contribute to the promotion of more sustainable human behaviours and to biodiversity conservation.

Altri partecipanti alla ricerca

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Ferdinando Fornara		SSD : M-PSI/05 - Psicologia sociale

Partner della ricerca

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University of Sonora, Mexico
Università degli Studi di Cagliari
Indian Assert Institute of Management

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Social Issues
Titolo : Inhabitants versus experts assessment of environmental quality for urban sustainability
Autore/i : Bonnes, M., Uzzell, D., Carrus, G., Kelay, T.

Nome rivista o titolo libro o atti conferenza : Journal of Social Issues
Anno : 2007
Numero volume : 63
Pagine da - a : 59-78
Nome rivista o titolo libro o atti conferenza : Journal of Environmental Psychology
Titolo : Affinity towards diversity as a correlate of sustainable orientation
Autore/i : Corral-Verdugo, V., Bonnes, M., Tapia-Fonllem C., Fraijo-Sing, B., Frias-Armenta, M., & Carrus, G.
Anno : 2009
Numero volume : 29
Pagine da - a : 34-43
Nome rivista o titolo libro o atti conferenza : Environment and Behavior
Titolo : The ambivalence of attitudes towards urban green areas: Between pro-environmental worldviews and daily residential experience
Autore/i : Bonnes, M., Passafaro, P., & Carrus, G.
Anno : 2011
Numero volume : 42
Pagine da - a : 207-232

MACROAREA : B

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Hand gestures encoding and decoding in social interaction

Codifica e decodifica dei gesti delle mani nell'interazione sociale

Research aims to study the role of hand gesture in speech: to describe and explain the specific intrapersonal and interpersonal processes involved in of speech-accompanying gestures production and evaluation. Correlational and experimental studies were carried out on gestures used by speaker and to analyze interpersonal processes involved in gestures decoding by the receivers, and to identify gestural profiles in relevant contexts: political speech, deception, persuasive communication, group, etc. In deception contexts, liar resulted using less deictic gestures and self-adaptors and more metaphoric gestures: in strong suspicion of lying, people use more metaphoric, rhythmic, and deictic gestures and less self-adaptors, emblematic, and cohesive gestures. In political speech, national politicians differ in their gestures-words associations which can be semantically interpreted along to two dimensions: abstract/concrete and assertiveness/uncertainty. Finally, in persuasive communication, experimental studies show principal effects of gesture type on receivers' evaluation of message persuasiveness, and of speaker's effectiveness, composure and competence. In general, gestures can therefore improve or damaging communication efficacy and they play a causal role on social perception.

Partner della ricerca

Dott. Fridanna Maricchiolo (Università degli Studi di Roma Tre); Prof. Augusto Gnisci (Seconda Università degli Studi di Napoli)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : The Spanish Journal of Psychology
Titolo : Hand gestures and perceived influence in small group interaction
Autore/i : Maricchiolo, F., Livi, S., Bonaiuto. M., Gnisci. A.
Anno : 2011

Nome rivista o titolo libro o atti conferenza : The Spanish Journal of Psychology
Numero volume : 14
Pagine da - a : http://dx.doi.org/10.5209/rev_SJOP.2011.v14.n
Issn : 1138-7416
Nome rivista o titolo libro o atti conferenza : Journal of Nonverbal Behavior
Titolo : The impact of deception and suspicion on different hand movements.
Autore/i : Caso, L., Maricchiolo, F., Bonaiuto, M., Vrij A. & Mann, S.
Anno : 2006
Numero volume : 30
Pagine da - a : 1-19
Nome rivista o titolo libro o atti conferenza : Language and Cognitive Processes
Titolo : Effects of different types of hand gestures in persuasive speech on receivers' evaluations
Autore/i : Maricchiolo, F., Gnisci, A., Bonaiuto, M. & Ficca, G.
Anno : 2009
Numero volume : 24
Pagine da - a : 239-266

MACROAREA : B

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Self-Disclosure to the Best Friend:Friendship Quality and Internalized Sexual Stigma in Italian Lesbian and Gay Adolescents

Self-Disclosure al Miglior Amico: Qualità dell'amicizia e Stigma Sessuale Interiorizzato in Adolescenti Gay e Lesbiche

This study is the first contribution to the understanding of gender differences in best friendship patterns of adolescents sexual minorities. We explored friendship patterns, self-disclosure, and internalized sexual stigma in an Italian sample of lesbian (N=202) and gay (N=201) adolescents (aged 14¿22 years). We found gender differences in cross-sex and cross-orientation patterns of best friendship. Gay men (52%) reported more cross-sex friendships than lesbians (20%). The 52% of participants had cross-orientation friendships, and no differences were found between lesbians and gay men. Lesbian and gay men with a cross-orientation best friend showed a lower level of internalized sexual stigma. Gay men with cross-orientation friendship showed a low level of internalized sexual stigma and less conflict with a best friend. For gay men and lesbian participants, self-disclosure to the best friend was better predicted by internalized sexual stigma and self-disclosure. Future studies may provide direct comparisons between heterosexual and sexual minority individuals.

Altri partecipanti alla ricerca

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Concetta Simona Nigito	Under 40	SSD : M-PSI/04 - Psicologia dello sviluppo e psicologia dell'educazione
Ileana Di Pomponio	Under 40	SSD : M-PSI/04 - Psicologia dello sviluppo e psicologia dell'educazione

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Addictive Behaviors
Titolo : Binge drinking among gay, and lesbian youths: The role of internalized homophobia, self-disclosure, and connectedness to the gay community.
Autore/i : Baiocco, R., D¿Alessio, M., Laghi, F.

Nome rivista o titolo libro o atti conferenza : Addictive Behaviors
Anno : 2010
Numero volume : 35
Pagine da - a : 896-899
Doi : 10.1016/j.addbeh.2010.06.00
Nome rivista o titolo libro o atti conferenza : Cyberpsychology, Behavior and Social Networking
Titolo : Daily Patterns of Communication and Contact Between Italian Early Adolescents and their Friends
Autore/i : Baiocco, R., Laghi, F., Schneider, B. H., D¿Alessio, M., Amichai-Hamburger, Y., Coplan, R. J., Koszcyki, D., Flament, M.
Anno : 2011
Numero volume : 14, 7-8
Pagine da - a : 467-471
Issn : 2152-2715
Doi : 10.1089/cyber.2010.0208

MACROAREA : B

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Association between attachment models of adoptive mothers and their late-adopted children

Associazione tra attaccamento in madri adottive e bambini adottati in seconda infanzia

This study examined the attachment patterns of late-adopted children and their adoptive mothers during the first 7- to 8-month period after adoption and aimed to evaluate the effect of adoptive mothers¿ attachment security on the revision of the attachment patterns of their late-adopted children.
We assessed attachment patterns in 20 adoptive dyads and 12 genetically related dyads at two different times: (T1) within 2 months of adoption and (T2) 6 months after T1.
The children¿s behavioural attachment patterns were assessed using the Separation-Reunion Procedure and the children¿s representational attachment patterns using the MCAST.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Child: Care, Health & Development
Titolo : 'Adoption and attachment theory¿ the attachment models of adoptive mothers and the revision of attachment patterns of their late-adopted children
Autore/i : Cecilia Serena Pace, Giulio Cesare Zavattini
Anno : 2011, Numero volume : 37(1)
Pagine da - a : 82-88
Issn : 1365-2214 (Electronic).
Doi : 10.1111/j.1365-2214.2010.01135.x.
Nome rivista o titolo libro o atti conferenza : Psicologia Clinica dello Sviluppo
Titolo : Le Relazioni riparano le rappresentazioni?Un'indagine sui modelli di attaccamento in madri adottive e bambini late-adopted
Autore/i : Pace Cecilia Serena, Castellano Rosetta, Messina Serena, Zavattini Giulio Cesare
Anno : 2009, Numero volume : 13(3)
Pagine da - a : 485-513
Issn : 1824-078X (Print).

MACROAREA : B

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Shared parenting and support interventions

Condivisione della genitorialità e interventi di sostegno

Coming into force of the law n. 54/06 ratifies the equality of parental relationship after divorce. In order to know how the implications of the law's application on parenting support interventions the research plans analyzes: a) the social representations toward shared custody in experts and divorced parents; b) the judments, issued in the Court of Milan, Rome and Naples, before and after the coming in force of the law. Participants were 200 juridical and social workers; and 100 divorced parents (study a); 850 judgment issuded before and after the coming in force of the law (study b). A questionnarie is been used to value experts' and parents' representation and the changes in work's praxis. The judgments reports are been examined through a specific form of content analysis. Results showed a difference beetwen the juridical and psychosocial representations and praxis levels. Social representations were more anchored to tradizional beliefs while juirdical and psychosocial praxis were more adjusted to the text law. The judjments issued after the new law change in custody, in visit planning and in motivation decide by judje. These result may be useful to elaborate a guidelines to identify better intervention for divorced parents ad regards the shared custody law.

Altri partecipanti alla ricerca

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Silvia Mazzoni		SSD : M-PSI/07 - Psicologia dinamica
Giancarlo Tamanza		SSD : M-PSI/08 - Psicologia clinica
Anna Lubrano Lavadera	Under 40	SSD : M-PSI/07 - Psicologia dinamica
Liliana Caravelli	Under 40	SSD : M-PSI/07 - Psicologia dinamica
Mirzia Bianca		SSD : IUS/01 - Diritto privato
Laura Carla Galante		SSD : M-PSI/08 - Psicologia clinica
Mimma Tafà		SSD : M-PSI/07 - Psicologia dinamica
Stefano Ferracuti		SSD : M-PSI/08 - Psicologia clinica

Partner della ricerca

Università Cattolica del Sacro Cuore di Milano - Facoltà di Scienze della Formazione

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF FAMILY ISSUES
Titolo : Child custody in Italian management of divorce.
Autore/i : A. LUBRANO LAVADERA and L. CARAVELLI and MALAGOLI TOGLIATTI M.
Anno : 2011
Issn : 0192-513X
Nome rivista o titolo libro o atti conferenza : THE AMERICAN JOURNAL OF FAMILY THERAPY
Titolo : Assessing Family Coordination in divorced families.
Autore/i : LUBRANO LAVADERA A and F. LAGHI and MALAGOLI TOGLIATTI M.
Anno : 2011
Numero volume : 39,
Pagine da - a : 277--291
Issn : 0192-6187
Doi : 10.1080/01926187.2010.539479

Nome rivista o titolo libro o atti conferenza : JOURNAL OF FAMILY ISSUES
Nome rivista o titolo libro o atti conferenza : INFANT MENTAL HEALTH JOURNAL
Titolo : Child symptoms and family alliances.
Autore/i : MAZZONI S and LUBRANO LAVADERA A and MALAGOLI TOGLIATTI M.
Anno : 2010
Numero volume : Supplement to Volume 32, 156
Issn : 0163-9641

MACROAREA : B

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The origins of psychology in Italy

Le origini della psicologia in Italia

The research examines the scientific-cultural context of the second half of the 1800s during which psychological science emerged in Italy. The article explores the contribution made by the emergence of the primary research traditions of that period, namely physiological anthropology and phreniatry1, by means of a methodology that combines content analysis with a classical historiographical study of the period. Themes and authors deriving from the various disciplines in the human and natural sciences were identified through a content analysis of the Rivista di Filosofia Scientifica (Journal of Scientific Philosophy), a periodical that is representative of Italian positivism. A clearly delineated naturalistic and differential perspective of scientific research that brought about the birth of psychology as an experimental discipline in Italy in the 1900s emerges from the analysis that includes: psychology and psychopathology as studied by the phreniatrists Gabriele Buccola, Enrico Morselli and Eugenio Tanzi; Tito Vignoli and Giuseppe Sergi s work on comparative anthropology; Giulio Fano s approach and contribution to physiology; and Enrico Ferri?s contribution to criminology.

Altri partecipanti alla ricerca

Chiara Bartolucci	Under 40	SSD : M-PSI/01 - Psicologia generale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : HISTORY OF PSYCHOLOGY
Titolo : The origins of psychology in Italy: Themes and authors that emerge through a content analysis of the Rivista di Filosofia Scientifica (Journal of Scientific Philosophy)
Autore/i : BARTOLUCCI C and LOMBARDO G.
Anno : 2011
Numero volume : in press
Issn : 1093-4510
Nome rivista o titolo libro o atti conferenza : HISTORY OF THE HUMAN SCIENCES
Titolo : Escape from the dark forest: The experimentalist standpoint of the Sante De Sanctis dreaming psychology
Autore/i : LOMBARDO G. and FOSCHI R
Anno : 2008
Numero volume : 21,
Pagine da - a : 45--69
Issn : 0952-6951
Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE HISTORY OF THE BEHAVIORAL SCIENCES
Titolo : Contexts and experimentalism in the psychology of Gabriele Buccola (1875-1885)

Nome rivista o titolo libro o atti conferenza : HISTORY OF PSYCHOLOGY
Autore/i : DEGNI S and FOSCHI R and LOMBARDO G.
Anno : 2007
Numero volume : 43,
Pagine da - a : 177--195
Issn : 0022-5061

MACROAREA : B

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Emotional, cognitive, and communicative competencies in the early hours of life

Competenze emotive, cognitive e comunicative nelle prime ore di vita

General aim was to investigate communicative competencies in newborns. Specifically to test if different types of communicative interactions in the first hours of life induce:
-different amounts and kinds of smiles;
-a preference of looking at the known face compared to a new face, cancelling the ?novelty effect?, as has been found with the mother?s face;
-different amounts and kinds of crying, evaluated by adults with different meanings.
130 healthy full-term newborns (10-50hrs) were recruited in 3 samples. The research was carried out at the maternity ward of Umberto I Policlinic in Rome.
Each newborn remained lying supine in his cradles, in a silent room, where all the experimental sessions were recorded using an audio-video apparatus (Cecchini et al,2010;2011a;2011b).
The findings did support the hypothesis: the communication did induce in the newborns:
-a lower amount of crying (with a lower % of dysphonic cry), evaluated less urgent from 20 females;
-a greater amount of social smile;
-an abolition of the successive preference for a new face, as has been found with the mother?s face.
Future research is oriented to identify EEG correlate of the communicative competences in newborns.
Clinical applications are identified in order to prevent developmental disorders.

Altri partecipanti alla ricerca

Marco Cecchini	SSD : M-PSI/08 - Psicologia clinica
Viviana Langher	SSD : M-PSI/08 - Psicologia clinica

Partner della ricerca

Reparto di neonatologia Ospedale San Pietro Fatebenefratelli
Reparto di neonatologia Policlinico Umberto I

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INFANT BEHAVIOR & DEVELOPMENT
Titolo : Smiling in newborns during communicative wake and active sleep
Autore/i : MARCO CECCHINI, ELEONORA BARONI, CINZIA DI VITO, LAI CARLO
Anno : 2011
Numero volume : 34
Pagine da - a : 417-423

Nome rivista o titolo libro o atti conferenza : INFANT BEHAVIOR & DEVELOPMENT
Issn : 0163-6383
Nome rivista o titolo libro o atti conferenza : INFANT BEHAVIOR & DEVELOPMENT
Titolo : Dysphonic newborn cries allow prediction of their perceived meaning
Autore/i : CECCHINI M, LAI CARLO, LANGHER VIVIANA
Anno : 2010
Numero volume : 33
Pagine da - a : 314-320
Issn : 0163-6383
Nome rivista o titolo libro o atti conferenza : INFANT BEHAVIOR & DEVELOPMENT
Titolo : Newborn preference for a new face vs. a previously seen communicative or motionless face
Autore/i : MARCO CECCHINI, ELEONORA BARONI, CINZIA DI VITO, FEDERICA PICCOLO, LAI CARLO
Anno : 2011
Numero volume : 34
Pagine da - a : 424-433
Issn : 0163-6383

MACROAREA : B

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The assessment of personality with the SWAP
(Shedler-Westen Assessment Procedure) and PDM
(Psychodynamic Diagnostic Manual): Personality style, core preoccupations, pathogenic believes and psychologycal well-being
La valutazione della personalità con la SWAP (Shedler-Westen Assessment Procedure) e il PDM
(Psychodynamic Diagnostic Manual): stile di personalità, preoccupazioni principali, credenze patogene e benessere psicologico

Personality disorders are a significant cause of stress and an important source of demands for psychiatric and psychological treatments, both in public and in private settings, in particular when they imply instability in interpersonal relationships, self-image, affect regulation and impulse control. In fact, these characteristics make often very problematic the management of the therapeutic relationship with these patients. Therefore, we have developed and validated assessment tools capable of providing indications both on the most compromised areas of personality disordered patients, and on their psychological resources and capacities of therapeutic alliance and productive involvement in psychotherapy. The application of instruments such as the Psychodynamic Diagnostic Manual (PDM), the Shedler-Westen Assessment Procedure-200 (SWAP-200), the Defence Mechanism Rating Scale (DMRS), the Personality Disorder Prototypes (PDP) and the Analytic Process Scales (APS) have enabled us to show how clinical and empirical instruments can complement each other and lead to a more precise understanding of personality subtypes, effective therapeutic factors and psychological changes in psychotherapy.

Altri partecipanti alla ricerca

Vittorio Lingiardi		SSD : M-PSI/07 - Psicologia dinamica
Margherita Lang		SSD : M-PSI/07 - Psicologia dinamica
Gianluca Lo Coco	Under 40	SSD : M-PSI/07 - Psicologia dinamica
Alessandro Zennaro		SSD : M-PSI/07 - Psicologia dinamica

Vittorio Lingiardi	SSD : M-PSI/07 - Psicologia dinamica
Drew Westen	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Jonathan Shedler	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Sherwood Waldron	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PERSONALITY ASSESSMENT
Titolo : Assessing Personality Change in Psychotherapy with the SWAP-200: A case study.
Autore/i : V. LINGIARDI and J. SHEDLER and GAZZILLO F.
Anno : 2006
Numero volume : 86,
Pagine da - a : 23--32
Issn : 0022-3891
Doi : 10.1207/s15327752jpa8601_04
Nome rivista o titolo libro o atti conferenza : La diagnosi in psicologia clinica: personalità e psicopatologia
Autore/i : Dazzi N. and Lingiadi V. and Gazzillo F.
Anno : 2009
Isbn : 9788860302649
Nome rivista o titolo libro o atti conferenza : PSYCHOANALYTIC PSYCHOLOGY?
Titolo : An Empirically Supported Psychoanalyisis: The
case of Giovanna
Autore/i : LINGIARDI V. and F. GAZZILLO and S. WALDRON
Anno : 2010
Numero volume : 27
Pagine da - a : 190-218
Issn : 0736-9735
Doi : 10.1037/a0019418

MACROAREA : B

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The pedagogy of Maria Montessori developed between "La Sapienza" and the Rome of the Mayor Nathan

Il metodo pedagogico di Maria Montessori elaborato fra "la Sapienza" e la Roma del sindaco Nathan

Between 1907 and 1908, Maria Montessori's (1870-1952) educational method was elaborated at the Children's Houses of the San Lorenzo district in Rome. This pioneering experience was the basis for the international fame that came to Montessori after the publication of her 1909 volume dedicated to her Method. The Montessori Method was considered by some to be scientific, liberal, and revolutionary. My line of research focuses upon the complex contexts of the method's elaboration. It shows how the Children's Houses developed in relation to a particular scientific and cultural eclecticism. It describes the factors that both favored and hindered the method's elaboration, by paying attention to the complex network of social, institutional, and scientific relationships revolving around the figure of Maria Montessori. A number of contradictory dimensions of Montessori's experience are also examined with a view to helping to revise her myth and offering the image of a scholar who was a real early-twentieth-century prototype of a multiple behavioral scientist.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : La cura dell'anima in Maria Montessori

Nome rivista o titolo libro o atti conferenza : La cura dell'anima in Maria Montessori
Titolo : Maria Montessori fra antropologia, psicologia e modernismo
Autore/i : FOSCHI R.
Anno : 2011
Pagine da - a : 9--27
Isbn : 9788895988344
Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE HISTORY OF THE BEHAVIORAL SCIENCES
Titolo : Science and culture around the Montessori's first "Children's Houses" in Rome (1907-1915)
Autore/i : FOSCHI R.
Anno : 2008
Numero volume : 44,
Pagine da - a : 238--257
Issn : 0022-5061
Doi : 10.1002/jhbs.20313
Nome rivista o titolo libro o atti conferenza : GIORNALE DI STORIA CONTEMPORANEA
Titolo : Maria Montessori e la prima Casa dei Bambini dell'Istituto Romano di Beni Stabili (1907)
Autore/i : FOSCHI R.
Anno : 2008
Numero volume : 10,
Pagine da - a : 160--174
Issn : 2037-7975

MACROAREA : B

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Human Genetics and malaria: not only a matter of resistance/susceptibility

Genetica umana e malaria: non solo una questione di resistenza e suscettibilità

Genetic factors play a key role in determining the resistance/susceptibility to infectious diseases. As to Plasmodium falciparum malaria, one of the strongest selective forces on the human genome, several epidemiological approaches contibuted to the identification of genetic factors influencing the resistance/susceptibility to the disease. Intra-ethnic case-control studies, based on a gene-candidate approach, showed the protective value of several hemoglobinopathies such as Hemoglobin S (HbS), HbC, alpha- and beta-thalassaemia. Genome-wide analyses based on the same case-control strategy represent the next step and are in progress in different epidemiological contexts. A complementary approach, based on the comparative analysis of the susceptibility to malaria among sympatric West-African ethnic groups, showed the existence of obvious inter-ethnic differences in the susceptibility and immune-reactivity to malaria providing an ideal model to study the role of human genetic variation in the development of anti-malaria immunity. A further research line of the group deals with the influence of human genetic variation on the efficiency of Plasmodium transmission from the human host to the vector and with the dynamics of selection of parasite drug-resistance.

Partner della ricerca

Wellcome Trust Centre for Human Genetics, University of Oxford, UK
Centre National de Recherche et Formation sur la Paludisme, Ministère de la Santé, Burkina Faso
Institut de Recherche en Sciences de la Santé, Ministère de la Recherche, Bobo-Dioulasso, Burkina Faso

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Nature Genetics

Titolo : Genetic variation in human HBB is associated with Plasmodium falciparum transmission

Autore/i : Gouagna LC, Bancone G, Yao F, Yameogo B, Dabiré KR, Costantini C, Simporé J, Ouedraogo JB, Modiano D

Anno : 2010

Numero volume : 42

Pagine da - a : 328-331

Issn : 1061-4036

Doi : 10.1038/ng.554

Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA

Titolo : Functional deficit of T regulatory cells in Fulani, an ethnic group with low susceptibility to Plasmodium falciparum malaria

Autore/i : Torcia MG, Santarlasci V, Cosmi L, Clemente A, Maggi L, Mangano VD, Verra F, Bancone G, Nebie I, Sirima BS, Liotta F, Frosali F, Angeli R, Severini C, Sannella AR, Bonini P, Maggi E, Garaci E, Coluzzi M, Cozzolino F, Annunziato F, Romagnani S, Modiano D

Anno : 2008

Numero volume : 105

Pagine da - a : 646--651

Issn : 0027-8424

Doi : 10.1073/pnas.0709969105

Nome rivista o titolo libro o atti conferenza : Nature Genetics

Titolo : Genome-wide and fine-resolution association analysis of malaria in West Africa.

Autore/i : Jallow M, Teo YY, Small KS, Rockett KA, et al.,Modiano D, et al. Wellcome Trust Case Control Consortium, Malaria Genomic Epidemiology Network

Anno : 2009

Numero volume : 41

Pagine da - a : 657-665

Issn : 1061-4036

Doi : 10.1038/ng.388

MACROAREA : B

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2009 Pandemic H1N1 Infection: role of innate immunity

Epidemia influenzale da H1N1 2009: ruolo dell'immunità naturale nelle forme polmonari gravi

Dysregulation of host immune responses plays a critical role in the pathogenesis of severe 2009 pandemic H1N1 infection. Whether H1N1 virus could escape innate immune defense in vivo remains to be investigated. The aim ofthis study was to evaluate the pattern of innate immune response during human 2009 H1N1 infection.

Blood samples were collected from 13 hospitalized patients with confirmed H1N1-related pneumonia at time of admission and at weeks 1, 4, and 16 of follow-up. 13 healthy donors were enrolled as controls. In theacute phase of the disease, H1N1-infected patients exhibited a significant depletion in both circulating pDC and mDC inconjunction with a decrease of CD4 and CD8 T cell count. In addition, we found plasmatic hyperproduction of IP-10 and RANTES, whereas increase in T-cell immune activation was found at all time points. When we assessed the changes in DC count over time, we observed a progressive normalization of mDC number. On the contrary, H1N1-infected patients did not achieve a complete recovery of pDC count as values remained lower than healthy controls even

after 16 weeks of follow-up. The persistence of pDC deficit for several weeks after disease recovery could be due to H1N1 virus itself or to a preexisting impairment of innate immunity.

Altri partecipanti alla ricerca

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Raffaella Rossi	Under 40	SSD : MED/17 - Malattie infettive
Gianluca Russo	Under 40	SSD : MED/17 - Malattie infettive
Claudia Mascia	Under 40	SSD : MED/17 - Malattie infettive
Fabio Mengoni		SSD : MED/07 - Microbiologia e microbiologia clinica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PLoS One
Titolo : 30. Severe and persistent depletion of circulating plasmacytoid dendritic cells in patients with 2009 pandemic H1N1 infection.
Autore/i : Lichtner M, Mastroianni CM, Rossi R, Russo G, Belvisi V, Marocco R, Mascia C, Del Borgo C, Mengoni F, Sauzullo I, d'Ettorre G, D'Agostino C, Massetti AP, Vullo V.
Anno : 2011
Numero volume : 5
Pagine da - a : 1-8
Nome rivista o titolo libro o atti conferenza : J Acquir Immune Defic Syndr.
Titolo : Downregulation of leukocyte migration after treatment with CCR5 antagonist maraviroc.
Autore/i : ichtner M, Rossi R, L, Sauzullo I, Mengoni F, Marocco R, Massetti AP, Mastroianni CM, Vullo V
Anno : 2010
Numero volume : 48
Pagine da - a : 4669-71
Nome rivista o titolo libro o atti conferenza : Clin Exp Immunol.
Titolo : 19. Circulating dendritic cells and interferon-alpha production in patients with tuberculosis: correlation with clinical outcome and treatment response. Lichtner M,
Autore/i : Rossi R, Mengoni F, Vignoli S, Colacchia B, Massetti AP, Kamga I, Hosmalin A, Vullo V, Mastroianni CM. Clin Exp Immunol.
Anno : 2006
Numero volume : 143
Pagine da - a : 329-37

MACROAREA : B

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respiratory and cardiovascular parameters and pulmonary nodules and urban pollution

parametri cardio-respiratori e noduli polmonari in lavoratori esposti ad inquinamento urbano

-By multilayer spiral low-dose computed tomography (LD-CT) of the chest this study assesses the early detection of lung lesions on a sample of 100 traffic policemen professionally exposed to urban pollutants and 100 controls The results of our study show that the interaction of smoking and exposure to urban pollutants greatly increases the risk for the development of solid suspicious lung nodules.
-The aim of our study is to assess the effects that different time of exposure to urban pollution can cause on respiratory

function in municipal traffic policemen. All subjects included in the study were tested for respiratory functions by a spirometer test. Statistical analysis showed a significant difference between group A and group B ($p<0.005$) in some spirometric parameters, such as Forced Expiratory Volume in one second (FEV1) and Forced Vital Capacity (FVC).
- The aim of this study was to evaluate the effects of urban pollutants on respiratory and cardiovascular function in exposed traffic policemen compared to a control group.
The data were statistically evaluated Twenty-six traffic policemen and none of the controls experienced exercise-induced ECG abnormalities, hypertension or oxyhaemoglobin desaturation; 80% of the 26 had resting PaO_2 values <80 mmHg.

Altri partecipanti alla ricerca

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MANUELA CIARROCCA	Under 40	SSD : MED/44 - Medicina del lavoro
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Partner della ricerca

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INAIL

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Environmental Research
Titolo : Pulmonary nodules in workers exposed to urban stressor
Autore/i : SANCINI A., FIORAVANTI M., CIARROCCA M., PALERMO P., FIASCHETTI M., SHIFANO M.P., TOMEI G., TOMEI F.
Anno : 2010
Numero volume : 110(5):
Pagine da - a : 519-25
Nome rivista o titolo libro o atti conferenza : Occupational Medicine (Oxford, England)
Titolo : Respiratory and cardiovascular function at rest and during exercise testing in a healthy working population: effects of outdoor traffic air pollution
Autore/i : VOLPINO P., TOMEI F., LA VALLE C., TOMAO E., ROSATI M.V.,
CIARROCCA M., DE SIO S., CANGEMI B., VIGLIAROLO R., FEDELE F.
Anno : 2004
Numero volume : 54 (7)
Pagine da - a : 475-482
Nome rivista o titolo libro o atti conferenza : European Journal of inflammation
Titolo : Respiratory parameters in traffic policemen exposed to urban pollution
Autore/i : SANCINI A, CACIARI T., ANDREOZZI G., SCIMITTO L., SCHIFANO M.P., DI GIORGIO V., SAMPERI I., FERRANTE E., FIASCHETTI M., TOMEI G., TOMEI F.
Anno : 2010
Numero volume : 8(2)
Pagine da - a : 157-163

MACROAREA : B

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Dipartimento : Scienze anatomiche, istologiche, medico-legali e dell'apparato locomotore

Urban pollution and immune-endocrine parameters

Parametri immuno endocrini e inquinamento urbano

-The aim of this study is to evaluate whether occupational exposure to urban stressors could cause alterations in free testosterone plasma values in male traffic policemen versus administrative.A total of 220 subjects were studied: 110 traffic policemen and 110 controls.The distribution into classes of testosterone values in traffic policemen and in controls was significant (P < 0.001).: Free testosterone plasma levels could be used as an early biological marker, to be employed in occupational sets.

- The aim of this study is to evaluate whether occupational exposure to urban pollutants can cause alterations in NK, IL-2, IFN-gamma and C3 plasma levels in female traffic police compared to a control group. our results suggest that chronic occupational exposure to low doses of chemical stressors, which may interact with and add to psychosocial ones, can affect both innate and adaptative immunity.

- The purpose of this study is to investigate whether occupational exposure to urban stressors can cause alterations on androstenedione plasma levels and related diseases.The research was carried out on an initial sample of 468 female workers (209 traffic police and 259 controls). The distribution into classes of androstenedione values in traffic police was statistically significant.

Altri partecipanti alla ricerca

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MANUELA DI FAMIANI	Under 40	SSD : MED/44 - Medicina del lavoro
FRANCESCO TOMEI		SSD : MED/44 - Medicina del lavoro
GIANFRANCO TOMEI	Under 40	SSD : M-PSI/01 - Psicologia generale

Partner della ricerca

MINISTERO DELLA SALUTE

EX ISPESL

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Int Arch Occ Env Hea

Titolo : Exposure to urban stressors and free testosterone plasma values

Autore/i : A. SANCINI, F.TOMEI, G. TOMEI, M. CIARROCCA, P. PALERMO, P.A. GIOFFRE¿, Z. TASC IOTTI, M. FIASCHETTI, C. CETICA, T. CACIARI

Anno : 2010

Pagine da - a : 1-8

Nome rivista o titolo libro o atti conferenza : European Journal of Inflammation

Titolo : Effects on plasmatic androstenedione in female workers exposed to urban stressor.

Autore/i : TOMEI G., SANCINI A., CERRATTI D., FIASCHETTI M., ANZANI M.F., CIARROCCA M., ROSATI M.V., TOMAO E., GIUBILATI R., PIMPINELLA B.,TOMEI F.

Anno : 2009

Numero volume : 7(3)

Pagine da - a : 175-182

Nome rivista o titolo libro o atti conferenza : Int Arch Occ Env Hea
Nome rivista o titolo libro o atti conferenza : Sci Total Environ
Titolo : Immune parameters in female workers exposed to urban pollutants
Autore/i : CIARROCCA M., TOMEI F., BERNARDINI A., CAPOZZELLA A., FIORE P., AMICARELLI V., SANCINI A., PERUGI F., FIRULLO E., ROSATI M.V., PIMPINELLA B., MONTI C., TOMEI G
Anno : 2006
Numero volume : 370 (1)
Pagine da - a : 17-22

MACROAREA : B

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Role of vascular endothelial growth factor (VEGF) and of Insulin-like growth factor 1 (IGF-1) in the modulation of cholestatic liver diseases both in experimental models and human pathologies.

Ruolo del fattore di crescita vascolare endoteliale (VEGF) e del fattore di crescita insulino-simile (IGF-1) nella modulazione di disordini colestatici in modelli sperimentali e in patologie umane.

Vascular endothelial growth factor (VEGF) and insulin-like growth factor 1 (IGF-1) play a key role in cellular functions of several epithelia. We investigate their effects on biliary epithelium in experimental model, such as bile duct ligated rats (BDL) and in human pathologies, such as cholangiocarcinoma (CCA). Normal and BDL rats were treated both in vivo and in vitro with r-VEGF-A, r-VEGF-C or anti-VEGF antibodies. In addition, we evaluated the presence of IGF-1 and its receptor (IGF-1R) in human CCA and CCA cell lines. We found that: i) cholangiocytes express VEGF-A, VEGF-C, their receptors VEGFR-2 and VEGFR-3, and secrete VEGF; ii) secretion and expression of VEGFs increase in BDL cholangiocytes, blocked by anti-VEGF antibodies; iii) administration of VEGF-A or VEGF-C induces cholangiocyte proliferation both in vivo and in vitro by activation of IP3/Ca2+/PKCα; iv) IGF-1 and IGF-1R were expressed in all biopsies of CCA; and v) they were expressed in the three cell lines examined, where IGF-1 serum-treatment induces cell proliferation, inhibited by IGF-1R antagonists. VEGF and IGF-1 stimulated proliferation of biliary epithelium. These effect was associated with enhanced protein expression of pERK1/2 and pAKT. In conclusion, VEGF and IGF-1 cooperate in the regulation of cholangiocyte growth and apoptosis. Modulation of VEGFR and IGF-1R could represent a strategy in the management of biliary disorders.

Brevetti

Multipotent stem cells from the extrahepatic biliary tree and methods of isolating same

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : AMERICAN JOURNAL OF PATHOLOGY
Titolo : Estrogens and insulin-like growth factor 1 modulate neoplastic cell growth in human cholangiocarcinoma
Autore/i : ALVARO D and BARBARO B and FRANCHITTO A and ONORI P and GLASER SS and ALPINI G and FRANCIS H and MARUCCI L and STERPETTI P and GINANNI-CORRADINI S and ONETTI MUDA A and DOSTAL DE and DE SANTIS A and ATTILI AF and BENEDETTI A and GAUDIO E.
Anno : 2006
Numero volume : 169,
Pagine da - a : 877--888
Issn : 0002-9440
Doi : 10.2353/ajpath.2006.050464
Nome rivista o titolo libro o atti conferenza : AMERICAN JOURNAL OF PHYSIOLOGY: GASTROINTESTINAL AND

Nome rivista o titolo libro o atti conferenza : AMERICAN JOURNAL OF PATHOLOGY
LIVER PHYSIOLOGY
Titolo : ADMINISTRATION OF r-VEGF-A PREVENTS HEPATIC ARTERY LIGATION INDUCED BILE DUCT DAMAGE IN BILE DUCT LIGATED RATS.
Autore/i : GAUDIO E. and BARBARO B and ALVARO D and GLASER S and FRANCIS H and A. FRANCHITTO and ONORI P and UENO Y and MARZIONI M and FAVA G and VENTER J and REICHENBACH R and SUMMERS R and ALPINI G
Anno : 2006
Numero volume : 291(2)
Pagine da - a : G307.--G317.
Issn : 0193-1857
Nome rivista o titolo libro o atti conferenza : GASTROENTEROLOGY
Titolo : Vascular endothelial growth factor stimulates rat cholangiocyte proliferation via an autocrine mechanism.
Autore/i : GAUDIO E. and BARBARO B and D. ALVARO and GLASER S and FRANCIS H and UENO Y and MEININGER CJ and FRANCHITTO A and ONORI P and MARZIONI M and TAFFETANI S and FAVA G and STOICA G and VENTER J and REICHENBACH R and DE MORROW S and SUMMERS R and ALPINI G.
Anno : 2006
Numero volume : 130,
Pagine da - a : 1270--1282
Issn : 0016-5085
Doi : 10.1053/j.gastro.2005.12.034

MACROAREA : B
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Dipartimento : Scienze anatomiche, istologiche, medico-legali e dell'apparato locomotore
Urban pollution and neurogenic parameters
parametri neurogeni e inquinamento urbano
- The aim of this study was to evaluate whether traffic policemen exposed to urban pollutants could be at risk of alterations on urinary homovanillic acid in 24h HVA(U) excretion levels, an end product of dopamine catabolism, compared with a control group. The HVA(U) excretion levels were significantly higher in male and female traffic policemen compared to not exposed subjects (respectively P=0.003; P=0.023). The authors hypothesize an effect on the excretion of HVA(U) in traffic policemen exposed to chemical and physical stressors
- The aim of the present study is to investigate whether traffic policemen of a big city exposed to urban pollutants may be at risk of alterations on plasma vasopressin (VP) concentrations compared with a control group. Traffic policemen and control subjects were matched by sex, age and working life. Plasma VP levels were determined in 82 subjects: 41 traffic policemen (18 men, 23 women) and 41 control subjects (18 men, 23 women). The authors hypothesise an effect on plasma VP levels in traffic policemen exposed to chemical and physical stressors, according to plasma VP levels modifications found by other authors in studies on animals and human subjects.
- The aim of this study is to evaluate if the occupational exposure to urban stressor could cause alterations in dopamine (DA) plasma levels and related diseases in traffic police officers compared to a control group
The distribution of DA values in traffic police officers and controls was significant (P = 0.000 and P = 0.000 in male and female, respectively). DA could be used as an early biological marker, valuable for the group to be employed in occupational sets, even before the onset of pathology

Altri partecipanti alla ricerca

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BARNABA GIUSEPPINA PONTICIELLO	Under 40	SSD : MED/44 - Medicina del lavoro
ZAIRA TASCIOTTI	Under 40	SSD : MED/44 - Medicina del lavoro
GIANFRANCO TOMEI	Under 40	SSD : M-PSI/01 - Psicologia generale
FRANCESCO TOMEI		SSD : MED/44 - Medicina del lavoro

Partner della ricerca

X Dipartimento Comune di Roma

PM Comune di Roma

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : J Environ Sci Heal (Part A) ?

Titolo : Work exposure to urban pollutants and urinary homovanillic acid.

Autore/i : TOMEI F., ROSATI M.V., CIARROCCA M., CHERUBINI E., BACCOLO T.P., ANZELMO V., TOMAO E.

Anno : 2003

Numero volume : 38 (12):

Pagine da - a : 2909-18

Nome rivista o titolo libro o atti conferenza : Ind Health

Titolo : Exposure to urban pollutants and plasma vasopressin in traffic policemen.

Autore/i : TOMEI F., CIARROCCA M., ROSATI M.V., BACCOLO T.P., GRIMALDI F.,TOMAO E.

Anno : 2004

Numero volume : 42 (2):

Pagine da - a : 246-251

Nome rivista o titolo libro o atti conferenza : Toxicol Ind Healt

Titolo : Plasma dopamine in workers exposed to urban stressor.

Autore/i : TOMEI G., CAPOZZELLA A., CIARROCCA M., FIORE P., ROSATI M.V.,FIASCHETTI M., CASALE T., ANZELMO V., TOMEI F., MONTI C.

Anno : 2007

Numero volume : 23:

Pagine da - a : 421-27

MACROAREA : B

beatrice vallone

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Dipartimento : Scienze biochimiche "Alessandro Rossi Fanelli"

Mechanism of action of neuroglobin: structure-function reationship

Meccanismo di neuroprotezione della neuroglobina: relazione struttura-funzione

Neuroglobin (Ngb) is a heme protein expressed in the Central Nervous System (CNS) of vertebrates; it has been shown in vivo and in vitro that its over-expression counteracts the effects of ischemia. Experimental evidence adds up to invoke for Ngb a role in promoting the resistance of nervous tissue against some pathological conditions of the brain such as the onset of Alzheimer disease and hypoxia/oxidative stress. We believe that Ngb is a crucial component of a biochemical process relevant to neuron survival physiologically, its predisposition to enhance this basic function under pathological conditions allows Ngb to play a protective role against degenerative diseases of the CNS. The characterization of

neuroprotection exerted by Ngb could pave the way to novel strategies for the treatment and prevention of neurodegeneration due to ischemia and other diseases.
We have determined by crystallography the structure of Ngb and we have characterized its properties in NO scavenging. Th structure of the CO derivative of Ngb has unveiled a novel mechanism in affinity control in globins, with relevant involvements in its signalling mechanism.

Altri partecipanti alla ricerca

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tommaso moschetti	Under 40	SSD : BIO/10 - Biochimica
chiara ardiccioni	Under 40	SSD : BIO/10 - Biochimica
alessandro arcovito	Under 40	SSD : BIO/10 - Biochimica
alessandro giuffrè	Under 40	SSD : BIO/10 - Biochimica

Partner della ricerca

Dept. of Biophysics, Ulm University, Germania
ESRF, European Synchrotron radiation Facility, Grenoble, FR
Bessy (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung) Berlino (GE)
CNR - Istituto di bilogia e patologia molecolari - Roma - Italia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA
Titolo : The structure of carbonmonoxy neuroglobin reveals a heme-sliding mechanism for control of ligand affinity.
Autore/i : VALLONE B., NIENHAUS K, MATTHES A, BRUNORI M, NIENHAUS GU.
Anno : 2004
Numero volume : 101
Pagine da - a : 17351-17356
Issn : 0027-8424
Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA,
Titolo : Neuroglobin, nitric oxide, and oxygen: functional pathways and conformational changes.
Autore/i : BRUNORI M, GIUFFRE A, NIENHAUS K, NIENHAUS GU, SCANDURRA FM, VALLONE B.
Anno : 2005
Numero volume : 102
Pagine da - a : 8483-8488
Issn : 0027-8424
Nome rivista o titolo libro o atti conferenza : FASEB JOURNAL
Titolo : A globin for the brain.
Autore/i : VALLONE B., BRUNORI, M
Anno : 2006
Numero volume : 20
Pagine da - a : 2192-2197
Issn : 0892-6638

MACROAREA : B

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Dipartimento : Scienze biochimiche "Alessandro Rossi Fanelli"

Role of lipid peroxidation in the pathogenesis and progression of Alzheimer disease

Ruolo della perossidazione lipidica nella patogenesi e progressione della malattia di ALzheimer

Alzheimer disease (AD) is an age-related neurodegenerative disorder for which currently there is no cure or prevention. Among different hypothesis proposed, oxidative stress is one of the most corroborated and we demonstrated in the brain of AD patients increased levels of oxidative stress markers such as protein oxidation, lipid peroxidation and induction of cellular stress response. Lipid peroxidation causes the release of highly reactive aldehydes among which 4-hydroxynonenal (HNE) is one the most toxic and can modify irreversibly proteins, and other substrates, leading to their dysfunction. We focused our research to identify HNE-modified proteins in three different stages of AD (mild cognitive impairment, early AD and late AD) by redox proteomics analysis of post mortem human brain. Several proteins ranging from those involved in energy metabolism, antioxidant response, excitotoxicity, protein synthesis, cholinergic function and synaptic function are oxidatively dysfunctional and correlate with the pathology. Our results highlighted that lipid peroxidation is an early event in the pathogenesis of AD and dysfunction of proteins involved in energy metabolism and mitochondrial function play a central role in degeneration of neuronal cells.

Altri partecipanti alla ricerca

Chiara Cini		SSD : BIO/10 - Biochimica
Fabio Di Domenico	Under 40	SSD : BIO/10 - Biochimica
Annalisa cocciolo	Under 40	SSD : BIO/10 - Biochimica

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Prof.ssa Patrizia Mecocci, Università di Perugia
Prof. D Allan Butterfield, University of Kentucky (USA)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Antioxidan and Redox Signaling
Titolo : Protein oxidation and lipid peroxidation in brain of subjects with Alzheimer's disease: insights into mechanism of neurodegeneration from redox proteomics
Autore/i : Sultana R, Perluigi M, Butterfield DA
Anno : 2006
Numero volume : 8(11-12)
Pagine da - a : 2021-37
Nome rivista o titolo libro o atti conferenza : Proteomics- Clinical Applications
Titolo : Redox proteomics identification of 4-hydroxynonenal-modified brain proteins in Alzheimer's disease: Role of lipid peroxidation in Alzheimer's disease pathogenesis
Autore/i : Perluigi M, Sultana R, Cenini G, Di Domenico F, Memo M, Pierce WM, Coccia R, Butterfield DA
Anno : 2009
Numero volume : 3(6)
Pagine da - a : 682-693
Nome rivista o titolo libro o atti conferenza : Neurobiology of disease
Titolo : Redox proteomic identification of 4-hydroxy-2-nonenal-modified brain proteins in amnestic mild cognitive impairment: insight into the role of lipid peroxidation in the progression and pathogenesis of Alzheimer's disease

Nome rivista o titolo libro o atti conferenza : Antioxidan and Redox Signaling
Autore/i : Reed T, Perluigi M, Sultana R, Pierce WM, Klein JB, Turner DM, Coccia R, Markesbery WR, Butterfield DA.
Anno : 2008
Numero volume : 30(1)
Pagine da - a : 107-20

MACROAREA : B

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Pyridoxal-5'-phosphate enzymes as targets for new therapeutic agents

Enzimi dipendenti dal Piridossal-5'-fosfato come bersagli per lo sviluppo di nuovi agenti chemioterapici

The vitamin B(6)-derived pyridoxal 5'-phosphate (PLP) is the cofactor of enzymes catalyzing a large variety of chemical reactions mainly involved in amino acid metabolism. Although about 4% of enzyme-catalyzed reactions catalogued by the Enzyme Commission are PLP-dependent, only a few enzymes are targets of approved drugs and about twenty are recognised as potential targets for drugs or herbicides. My research group is involved in the evolutionary, structural and functional characterization of several protein targets for the development of therapeutic agents, including: serine hydroxymethyltransferase (tumors and malaria), alanine:glyoxylate aminotransferase (primary hyperoxaluria type I); DOPA decarboxylase (involved in the Parkinson disease).
To this end, our long lasting experience in the fields of bioinformatics and computational biology ties directly into the ability to design and develop in-house algorithms and software tools and to exploit state-of-the-art tools in the fields of homology modeling, virtual screening, molecular docking and dynamics, to model the structure of therapeutic protein targets, characterize their attributes, and rationally design specific inhibitors.

Altri partecipanti alla ricerca

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Stefano Pascarella		SSD : BIO/10 - Biochimica
Francesco Bossa		SSD : BIO/10 - Biochimica

Partner della ricerca

Prof. Carla Voltattorni, Università degli Studi di Verona

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : J Biol Chem.
Titolo : Insight into the Synergism between the Minor Allele of Human Liver Peroxisomal Alanine:Glyoxylate Aminotransferase and the F152I Mutation.
Autore/i : Cellini B, Montioli R, Paiardini A, Lorenzetto A, Voltattorni CB.
Anno : 2009
Numero volume : 284(13)
Pagine da - a : 8349-58
Nome rivista o titolo libro o atti conferenza : Eur J Med Chem.
Titolo : In silico and in vitro validation of serine hydroxymethyltransferase as a chemotherapeutic target of the antifolate drug pemetrexed.

Nome rivista o titolo libro o atti conferenza : J Biol Chem.
Autore/i : Daidone F, Florio R, Rinaldo S, Contestabile R, di Salvo ML, Cutruzzolà F, Bossa F, Paiardini A.
Anno : 2011
Numero volume : 46(5)
Pagine da - a : 1616-21
Nome rivista o titolo libro o atti conferenza : Proc Natl Acad Sci U S A.
Titolo : Molecular defects of the glycine 41 variants of alanine glyoxylate aminotransferase associated with primary hyperoxaluria type I.
Autore/i : Cellini B, Montioli R, Paiardini A, Lorenzetto A, Maset F, Bellini T, Oppici E, Voltattorni CB.
Anno : 2010
Numero volume : 107(7)
Pagine da - a : 2896-901

MACROAREA : B

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Characterization of antibodies of clinical interest: an integrated approach

Caratterizzazione di anticorpi di interesse clinico: un approccio integrato

Antibodies are among the principal molecules in our organism, driving the immune response against foreign infections and involved in the majority of pathological states, including parasitic diseases, autoimmunity and cancer. Antibodies are complex molecules acting in a complex environment, and the unraveling of their characteristics requires the integration of genomic, proteomic, functional and clinical data. The aim of our work is to provide a unified framework and computational tools to unveil antibody role in several clinical scenarios in order to provide more accurate diagnosis and to develop better treatments. Following the experience accumulated in years of theoretical and practical analysis and several collaborations with experimental and clinical groups we developed a database (DIGIT) to easily retrieve all the important information about known antibodies and a method (PIGS) to predict the three-dimensional structure of an immunoglobulin. Such methods were used in several practical applications, such as the analysis of the role of antigenic stimulation in the etiology and prognosis of chronic lymphoid leukemia and splenic marginal zone lymphoma, two common lymphoproliferative disorders, a fundamental step to understand and front such diseases.

Altri partecipanti alla ricerca

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Anna Chailyan	Under 40	SSD : BIO/10 - Biochimica

Partner della ricerca

Prof. Fabio Ghiotto
Prof. Luca Arcaini

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : MOLECULAR MEDICINE
Titolo : Mutation pattern of paired immunoglobulin heavy and light variable domains in chronic lymphocytic leukemia B-cells.

Nome rivista o titolo libro o atti conferenza : MOLECULAR MEDICINE
Autore/i : GHIOTTO F and MARCATILI P. and TENCA C and CALEVO M.G and YAN X.J and ALBESIANO E and BAGNARA D and COLOMBO M and CUTRONA G and CHU C.C and MORABITO F and BRUNO S and FERRARINI M and TRAMONTANO A and FAIS F and CHIORAZZI N
Issn : 1076-1551
Doi : 10.2119/molmed.2011.00104
Nome rivista o titolo libro o atti conferenza : NUCLEIC ACIDS RESEARCH
Titolo : A database of immunoglobulins with integrated tools: DIGIT
Autore/i : CHAILYAN A and TRAMONTANO A and MARCATILI P.
Issn : 0305-1048
Doi : 10.1093/nar/gkr806
Nome rivista o titolo libro o atti conferenza : BIOINFORMATICS
Titolo : PIGS: automatic prediction of antibody structures
Autore/i : MARCATILI P. and ROSI A and TRAMONTANO A
Anno : 2008
Numero volume : 24,
Pagine da - a : 1953--1954
Issn : 1367-4803
Doi : 10.1093/bioinformatics/btn341

MACROAREA : B

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Proteomics analysis of phosphorylative and N-/O- glycosylative post translational modifications in alzheimer disease brain: involvement in pathogenesis and progression of the disease

Analisi proteomica delle modificazioni fosforilative ed N-/O- glicosilative in cervelli di pazienti con la malattia di Alzheimer: Coinvolgimento nella patogenesi e nella progresione della malattia.

In the past years we focus our interest on the analysis of protein oxidative modifications confirming their involvement in Alzheimer disease (AD) development. This project is aimed to complete a further step in the analysis of aberrant protein post-translational modifications (PTMs) and serves to gain new insight about the dysfunctional molecular mechanism that contributes to AD pathogenesis. Thus, by a proteomics approach, we studied the alterations in proteins glycosylation, both N- and O-linked, and proteins phosphorylation in human AD post-mortem brain samples compared to age-matched controls. Previous works already showed that alterations of these PTMs occurs in AD, but much effort has been made on the study of tau protein only. Our research demonstrated, aberrant both N- and O-glycosylation, and aberrant phosphorylation in a number of new proteins involved in molecular pathways, such energy metabolism, unfolded protein response or cell structure, crucial during AD onset and progression. Moreover, we observed a reciprocal relationship between O-GlcNAcylation and phosphorylation for gamma enolase protein, confirming the interplay between this specific glycosylation and phosphorylation and suggesting the potential involvement of this interplay in AD.

Altri partecipanti alla ricerca

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Chiara Cini		SSD : BIO/10 - Biochimica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Proteomics

Titolo : Quantitative proteomics analysis of phosphorylated proteins in the hippocampus of Alzheimer's disease subjects.

Autore/i : Di Domenico F, Sultana R, Barone E, Perluigi M, Cini C, Mancuso C, Cai J, Pierce WM, Butterfield DA.

Anno : 2011

Numero volume : 74(7)

Pagine da - a : 1091-103

Issn : 1874-3919

Doi : 10.1016/j.jprot.2011.03.033

Nome rivista o titolo libro o atti conferenza : Journal of Neuroscience Research

Titolo : The wheat germ agglutinin-fractionated proteome of subjects with Alzheimer's disease and mild cognitive impairment hippocampus and inferior parietal lobule: Implications for disease pathogenesis and progression

Autore/i : Di Domenico F, Owen JB, Sultana R, Sowell RA, Perluigi M, Cini C, Cai J, Pierce WM, Butterfield DA

Anno : 2010

Numero volume : 88

Pagine da - a : 3566-77

Issn : 0360- 4012

Doi : 10.1002/jnr.22528.

Nome rivista o titolo libro o atti conferenza : Proteome Reserch

Titolo : Proteomics-determined differences in the concanavalin-A-fractionated proteome of hippocampus and inferior parietal lobule in subjects with Alzheimer's disease and mild cognitive impairment: implications for progression of AD

Autore/i : Owen JB, Di Domenico F, Sultana R, Perluigi M, Cini C, Pierce WM, Butterfield DA

Anno : 2009

Numero volume : 8

Pagine da - a : 471-82

Issn : 1535-3893

Doi : 10.1021/pr800667a

MACROAREA : B

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INHIBITION OF BACTERIAL BIOFILMS: NEW MOLECULAR STRATEGIES TARGETING CYCLIC-DI-GMP AND NITRIC OXIDE METABOLISM

INIBIZIONE DEI BIOFILM BATTERICI: NUOVE STRATEGIE MOLECOLARI DIRETTE CONTRO IL METABOLISMO DEL DI-GMP CICLICO E DELL'OSSIDO NITRICO

Persistent bacterial infections pose serious problems for human health. Bacteria are able to escape the host defence system and resist to antimicrobials because they can form a multicellular state called biofilm which implies genetic, metabolic and morphological changes. Biofilms formed by bacterial pathogens are responsible of more than 60% of all infections in developed countries.

Pseudomonas aeruginosa, an opportunistic human pathogen, is a major cause of infections in tissues and medical devices and the main cause of death in cystic fibrosis (CF) patients. After causing an initial acute disease state, this bacterium establishes persistent infection and colonizes the host by evading immune surveillance.

The goal of our program is to study two relevant aspects of Pseudomonas aeruginosa metabolism during persistent infection, namely the metabolism of nitric oxide (NO) and the role of the second messenger cyclic-diGMP in biofilm formation. Our approach includes biochemical, structural biology and in vivo studies on:

-enzymes involved in the synthesis of NO and regulators acting as NO sensors;
-enzymes involved in the synthesis and degradation of cyclic-diGMP.
The final aim is to devise new therapeutic approaches to treat respiratory infections caused by Pseudomonas aeruginosa.

Altri partecipanti alla ricerca

SERENA RINALDO	Under 40	SSD : BIO/10 - Biochimica
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DR. LIVIA LEONIUNIVERSITA' ROMA TRE

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE AMERICAN CHEMICAL SOCIETY
Titolo : Dynamic hydrogen bonding network in the distal pocket of the nitrosyl complex of Pseudomonas aeruginosa cd1 nitrite reductase
Autore/i : RADOUL M and BYKOV D and RINALDO S and CUTRUZZOLA' F. and NEESE F and GOLDFARB D
Anno : 2011
Numero volume : 133,
Pagine da - a : 3043--3055
Issn : 0002-7863
Nome rivista o titolo libro o atti conferenza : BIOCHEMICAL JOURNAL
Titolo : Observation of fast release of NO from ferrous d1 haem allows formulation of a unified reaction mechanism for cytochrome cd1 nitrite reductases.
Autore/i : RINALDO S and SAM K.A and CASTIGLIONE N and STELITANO V and ARCOVITO A. BRUNORI M and ALLEN J.A and FERGUSON S.J and CUTRUZZOLA' F.
Anno : 2011
Numero volume : 435,
Pagine da - a : 217--225
Issn : 0264-6021
Nome rivista o titolo libro o atti conferenza : JOURNAL OF MOLECULAR BIOLOGY
Titolo : NO-sensing in Pseudomonas aeruginosa: Structure of the transcriptional regulator DNR
Autore/i : GIARDINA G and RINALDO S and JOHNSON and K.A and DI MATTEO A and BRUNORI M and CUTRUZZOLA' F.
Anno : 2008
Numero volume : 378,
Pagine da - a : 1002--1015
Issn : 0022-2836
Doi : 10.1016/j.jmb.2008.03.013

MACROAREA : B

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Thioredoxin Glutathione Reductase from Schistosoma mansoni: a key enzyme for the survival of the parasite
La Tioredossina Glutatione Reduttasi di Schistosoma mansoni:un enzima essenziale alla sopravvivenza del parassita.

Schistosomiasis is a parasitic disease affecting over 200 million people and currently treated with one drug, praziquantel. A possible drug target is the seleno-protein thioredoxin-glutathione reductase (TGR), a key enzyme in the pathway of the parasite for detoxification of reactive oxygen species. This homodimeric enzyme is a unique fusion of a glutaredoxin domain with a thioredoxin reductase domain, which contains a FAD and a selenocysteine (Sec) residue. The three dimensional structure of TGR from Schistosoma mansoni has been solved for the first time in our laboratory by X-ray crystallography and it is still the only structure of a TGR available in the PDB database. Besides solving the structure of the enzyme, we characterized its catalytic cycle, with all its intermediates, and demonstrated that TGR is the target of Auranofin (AF), a gold-containing compound already in clinical use as an anti-arthritic drug. Gold released from AF has been found combined with at least two Cys couples relevant to the enzyme activity. Our research provides a strong rationale for the use of AF as an antielmynthic.

Altri partecipanti alla ricerca

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Daniela Dimastrogiovanni	Under 40	SSD : BIO/10 - Biochimica
Giovanna Boumis		SSD : BIO/10 - Biochimica
Adriana Erica Miele	Under 40	SSD : BIO/10 - Biochimica

Partner della ricerca

David L. Williams, Rush University, Chicago, IL, USA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : The Journal of Biological Chemistry
Titolo : Mapping the catalytic cycle of Schistosoma mansoni thioredoxin glutathione reductase by X-ray crystallography.
Autore/i : Angelucci F, Dimastrogiovanni D, Boumis G, Brunori M, Miele AE, Saccoccia F, Bellelli A.
Anno : 2010
Numero volume : 285(42)
Pagine da - a : 32557-67
Doi : 10.1074/jbc.M110.141960
Nome rivista o titolo libro o atti conferenza : Structure
Titolo : Glutathione reductase and thioredoxin reductase at the crossroad: the structure of Schistosoma mansoni thioredoxin glutathione reductase.
Autore/i : Angelucci F, Miele AE, Boumis G, Dimastrogiovanni D, Brunori M, Bellelli A.
Anno : 2008
Numero volume : 72(3)
Pagine da - a : 936-945
Doi : 10.1002/prot.21986
Nome rivista o titolo libro o atti conferenza : The Journal of Biological Chemistry
Titolo : Inhibition of Schistosoma mansoni thioredoxin-glutathione reductase by auranofin: structural and kinetic aspects.

Nome rivista o titolo libro o atti conferenza : The Journal of Biological Chemistry
Autore/i : Angelucci F, Sayed AA, Williams DL, Boumis G, Brunori M, Dimastrogiovanni D, Miele AE, Pauly F, Bellelli A.
Anno : 2009
Numero volume : 284(42)
Pagine da - a : 28977-85
Doi : 10.1074/jbc.M109.020701

MACROAREA : B

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Limbal stem cell in recomstruction of corneal burns

Ricerca di cellule staminali limbari nel trattamento delle ustioni corneali

Altri partecipanti alla ricerca

Antonella Calogero		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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MACROAREA : B

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CORPUS CALLOSUM AND SCHIZOPHRENIA

CORPO CALLOSO E SCHIZOFRENIA

Corpus Callosum (CC) size and interhemispheric communication have been found to be abnormal in schizophrenia within a wider range of neurodevelopmental abnormalities. The significance of these latter and their relationship to the development of schizophrenia remain unclear. The goal of this investigation was to determine the sites and extent of specific Corpus Callosum (CC) structural changes in schizophrenia patients compared to controls. Midsagittal CC linear and area MRI measurements were performed with Scion Image 4.0.3.2, which is the Windows© version of the NIH Image software, utilizing a semi-automated segmentation approach.
Considering possible confounders such as age, gender, handedness, as well as the variability in the method of CC partitioning, our study sample is the largest used so far (100 right-handed male subjects, ageing 18-55 years). Yet we controlled for age at onset, illness duration and exposure to antipsychotic medication.
Reductions in CC splenium width and CC anterior midbody area were found in schizophrenia patients relative to controls. Moreover, a potential age effect on decrement in CC size has been suggested among schizophrenics.
A dysfunctional implication of CC abnormalities was further explored by the study of Neurological Soft Signs.

Altri partecipanti alla ricerca

Claudio Di Biasi		SSD : MED/36 - Diagnostica per immagini e radioterapia
Adele Quartini		SSD : MED/25 - Psichiatria
Angela Iannitelli		SSD : MED/25 - Psichiatria
Marco Paolemili	Under 40	SSD : MED/25 - Psichiatria
Gianfranco Gualdi		SSD : MED/36 - Diagnostica per immagini e radioterapia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Neuroscience Letters

Titolo : Neurological Soft Signs and Corpus Callosum morphology in schizophrenia.

Autore/i : Bersani G., Quartini A., Paolemili M., Clemente R., Iannitelli A., Di Biasi C., Gualdi G.

Anno : 2011

Numero volume : 499

Pagine da - a : 170-174

Nome rivista o titolo libro o atti conferenza : Psychiatry Research: Neuroimaging.

Titolo : Corpus Callosum Abnormalities and potential age effect in male schizophrenics. An MRI comparative study.

Autore/i : Bersani G., Quartini A., Iannitelli A., Paolemili M., Ratti F., Di Biasi C., Gualdi G.

Anno : 2010

Numero volume : 183

Pagine da - a : 119-125

Nome rivista o titolo libro o atti conferenza : Journal of Neuroradiology

Titolo : Brain abnormalities in schizophrenia. A qualitative comparative study of schizophrenic patients and control individuals assessed by Magnetic Resonance Imaging.

Autore/i : Bersani G., Quartini A., Piperopoulos O., Iannitelli A., Paolemili M., Pucci D., Di Biasi C., Gualdi G., Pancheri P.

Anno : 2006

Numero volume : 33

Pagine da - a : 152-157

MACROAREA : C

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Sleeve gastrectomy for the treatment of type 2 diabetes mellitus.

Ruolo della Sleeve Gastrectomy nel trattamento del Diabete Mellito tipo 2

Introduction: Obesity is a major risk factor for the development of type 2 diabetes mellitus (T2DM). In Western countries, is the main cause of blindness, kidney failure and amputations. Several data suggest that Sleeve Gastrectomy (SG) is effective in treating weight loss and co-morbidities and has a low complication rate.

Aim: to define the possible role of SG in the treatment of T2DM evaluating the pathophysiological mechanisms and the clinical effects.

Materials and methods: Between October 2002 and June 2011, 91 obese diabetic patients underwent laparoscopic SG. In 18 insulin secretion and peripheral insulin sensitivity using IVGTT were assessed and ghrelin, GLP-1 and PYY levels were determined. 9 were nonmorbidly obese patients (BMI 30-35 Kg/m2). 17 patients had lived with diabetes for over 10 years.

Results: The T2DM remission rate in all 91 patients was 83.5%. The IVGTT showed the prompt improving of first phase of insulin secretion and insulin peripheral sensitivity in patients with T2DM duration <10 years. SG induces reduction of ghrelin levels and increasing of PYY an GLP-1 values. In patients with BMI<35, T2DM resolution was achieved in 8/9 patients (88.8%). T2DM duration <10 years was associated with 100% of remission.

Conclusions: SG is effective in the treatment of obese patients with T2DM. After SG the improvement of insulin action occurred rapidly and independently of weight loss. A ¿gastric¿ hypothesis may be put forward to explain the antidiabetic effect of SG. The SG seems a promising procedure for the surgical treatment of T2DM.

Altri partecipanti alla ricerca

Giovanni Casella	Under 40	SSD : MED/18 - Chirurgia generale
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Frida Leonetti		SSD : MED/13 - Endocrinologia
Danila Capoccia	Under 40	SSD : MED/13 - Endocrinologia
Emanuele Soricelli	Under 40	SSD : MED/18 - Chirurgia generale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Obesity Surgery
Titolo : Early postoperative insulin-resistance changes after sleeve gastrectomy.
Autore/i : Rizzello M, Abbatini F, Casella G, Alessandri G, Fantini A, Leonetti F, Basso N.
Anno : 2010
Numero volume : 20(1):
Pagine da - a : 50-5.
Nome rivista o titolo libro o atti conferenza : Surgical Endoscopy
Titolo : First-phase insulin secretion, insulin sensitivity, ghrelin, GLP-1, and PYY changes 72 h after sleeve gastrectomy in obese diabetic patients: the gastric hypothesis.
Autore/i : Basso N, Capoccia D, Rizzello M, Abbatini F, Mariani P, Maglio C, Coccia F, Borgonuovo G, De Luca ML, Asprino R, Alessandri G, Casella G, Leonetti F.
Anno : 2011
Numero volume : 3
Nome rivista o titolo libro o atti conferenza : Surgery for Obesity and Related diseases
Titolo : Type 2 Diabetes In BMI 30-35 Obese Patients: Sleeve Gastrectomy Vs Medical Treatment
Autore/i : F. Abbatini, D. Capoccia, G. Casella, F. Coccia, F. Leonetti, N. Basso
Anno : 2011

MACROAREA : C

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Cytoreductive surgery (peritonectomy procedures) combined with hyperthermic intraperitoneal chemotherapy (HIPEC) in the treatment of diffuse peritoneal carcinomatosis from ovarian cancer.

LA PERITONECTOMIA CON CHEMIOIPERTERMIA INTRAPERITONEALE (HIPEC) NEL TRATTAMENTO DELLA CARCINOSI PERITONEALE DIFFUSA DA CARCINOMA OVARICO

BACKGROUND. Owing to the scarce data from larger series further information is needed on peritonectomy with hyperthermic intraperitoneal chemotherapy (HIPEC) in managing patients with ovarian peritoneal carcinomatosis.
PATIENTS AND METHODS. From November 2000 to April 2011 we enrolled 100 patients with primary advanced or recurrent ovarian cancer and diffuse peritoneal carcinomatosis, 48 underwent primary and 52 secondary cytoreduction plus immediate HIPEC followed by systemic chemotherapy.
RESULTS. The overall mean peritoneal cancer index was 18.3 (range 3-39). A mean 7,4 surgical procedures were required per patient (range 4-10). In 90% of patients debulking achieved optimal cytoreduction (Sugarbaker completeness of cytoreduction (CC) score 0-1) whereas in 10% it left macroscopic residual disease (CC-2 or CC-3). Major complications developed in 21% of patients and in-hospital mortality rate was 3%. 5-years overall survival was 49,8%; 5-years disease-free survival was 39,8%. Multivariate analysis identified CC score ($p<0.003$) and deepness of invasion of the colorectal wall ($p<0.004$) as the main independent prognostic factors.

CONCLUSIONS. Peritonectomy procedures combined with HIPEC offer promising long-term survival in patients with diffuse peritoneal ovarian carcinomatosis.

Altri partecipanti alla ricerca

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tommaso cornali	Under 40	SSD : MED/18 - Chirurgia generale
ANNA MARIA BACCHESCHI	Under 40	SSD : MED/18 - Chirurgia generale

Partner della ricerca

RAND s.r.l.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Abdominal Imaging
Titolo : 64-Section multi-detector row CT in the preoperative diagnosis of peritoneal carcinomatosis: correlation with histopathological findings.
Autore/i : Marin D, Catalano C, Baski M, Di Martino M, Geiger D, Di Giorgio A, Sibio S, Passariello R.
Anno : 2010
Numero volume : 35(6)
Pagine da - a : 694-700
Doi : 10.1007/s00261-008-9464-9
Nome rivista o titolo libro o atti conferenza : CANCER
Titolo : Cytoreductive Surgery (Peritonectomy Procedures) Combined With Hyperthermic Intraperitoneal Chemotherapy (HIPEC) in the Treatment of Diffuse Peritoneal Carcinomatosis From Ovarian Cancer
Autore/i : Angelo Di Giorgio,Enzo Naticchioni, Daniele Biacchi, Simone Sibio, Fabio Accarpio, Monica Rocco, Sergio Tarquini, Marisa Di Seri, Antonio Ciardi, Daniele Montruccoli, Paolo Sammartino
Anno : 2008
Numero volume : 113(2)
Pagine da - a : 315-325
Nome rivista o titolo libro o atti conferenza : Endocrine pathology
Titolo : Predominant Brenner tumor combined with struma ovarii containing a papillary microcarcinoma associated with benign peritoneal strumosis: report of a case and histologic features.
Autore/i : Sibio S, Borrini F, Sammartino P, Accarpio F, Biacchi D, Caprio G, Iafrate F, Baccheschi AM, Cornali T, Di Giorgio A.
Anno : 2010
Numero volume : 21(3)
Pagine da - a : 199-203
Doi : 10.1007/s12022-010-9123-x

MACROAREA : C

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Body mass index is related to autonomic nervous system activity as measured by heart rate variablity.
L'indice di massa corporea è correlato all'attività del sistema nervoso autonomo misurata con metodica della variabilità della frequenza cardiaca.
Objective: Autonomic nervous system (ANS) activity is involved in body weight regulation. We assessed whether body mass index (BMI) is related to ANS activity as assessed by Heart Rate Variability (HRV).
Materials and Methods: Twenty-five adult normotensive, euglycemic healthy males (M) and females (F) were studied (M/F = 13/12). BMI was assessed in each individual. HRV was assessed and the domains of low frequencies (LF; index of the sympathetic modulation) and high frequencies (HF; index of the parasympathetic modulation) were measured. Data were statistically analyzed and are presented as mean ± SD.
Results: Mean BMI did not correlate with either HF or LF. Mean BMI inversely related to HF ($r=-0.50$; $p<0.01$), while its relationship with LF was marginally significant ($r=-0.39$; $p=0.05$). HF in individuals with BMI <20 kg/m2 was significantly higher from those measured in remaining subjects ($p<0.05$). Conclusion: Our data show that the ANS acitivity represents a primary factor modulating body size. It counteracts the effects of excess energy intake on body size accretion by increasing energy expenditure. The sympatho-vagal balance appears to be genetically determined, and therefore may explain the inter-individual difference in the susceptibilty to gain body weight.

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Nature Review Endocrinology
Titolo : Insulin signaling and tight glucose control: a genetic link?
Autore/i : Laviano A, Muscaritoli M, Molfino A
Anno : 2010
Numero volume : 6
Nome rivista o titolo libro o atti conferenza : American Journal of Physiology Endocrinology and Metabolism
Titolo : Sympathetic nervous system activity may link hyperphagia and fat deposition in human obesity
Autore/i : Molfino A, Rossi Fanelli F, Laviano A
Anno : 2007
Numero volume : 293
Nome rivista o titolo libro o atti conferenza : European journal of Clinical Nutrition
Titolo : Body mass index is related to autonomic nervous system activity as measured by heart rate variability
Autore/i : Molfino A, Fiorentini A, Tubani L, Martuscelli M, Rossi Fanelli F, Laviano A
Anno : 2009
Numero volume : 63
Pagine da - a : 1263-1265
Doi : 10.1038/ejcn.2009.35

MACROAREA : C
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Dipartimento : Medicina interna e specialità mediche
Choroidopathy in patients with systemic lupus erythematosus with or without nephropathy
Coroidopatia in pazienti con lupus eritematoso sistemico con o senza nefropatia
The aim was to evaluate indocyanine green angiographic (ICG-A) findings in pts with systemic lupus erythematosus (SLE) with or without lupus nephritis (LN). In particular, choroidal abnormalities at ICG-A that could not be detected by fluorescein angiography (FAG) were investigated.
Methods: Sixteen SLE pts, divided into 2 groups based on whether LN was present (group A, n=9) or not (group B, n=7),

underwent simultaneous ICG-A and FAG. Results: While FAG disclosed the deposits in only 4 out of 9 group A pts (44.4%), drusen-like deposits were found in all group A pts by ICG-A. FAG and ICG-A didn't show alterations in group B pts. Conclusions: In pts with LN, ICG-A allows to disclose signs, not detectable by FAG, which could represent an early indicator of ocular involvement and, indirectly, of renal involvement. Given that histological lesions of the kidney may be present also in absence of anomalies in urinary sediment and/or proteinuria, the positivity of ICG-A could be useful in deciding whether or not to carry out a renal biopsy. Therefore, ICG-A could be useful in the screening of SLE pts, especially in absence of evident signs of renal involvement. Moreover, early diagnosis and treatment could improve clinical outcome of LN, decreasing the risk of end stage renal disease.

Altri partecipanti alla ricerca

Magda Gharbiya		SSD : MED/30 - Malattie apparato visivo
Corrado Balacco-Gabrielli		SSD : MED/30 - Malattie apparato visivo
Tommaso Mascaro	Under 40	SSD : MED/30 - Malattie apparato visivo
Concetta Gangemi	Under 40	SSD : MED/14 - Nefrologia
Di Franco Manuela		SSD : MED/16 - Reumatologia
Santo Morabito		SSD : MED/14 - Nefrologia
Gabriella Pecci		SSD : MED/14 - Nefrologia
Alessandro Pierucci		SSD : MED/14 - Nefrologia
Veronica Baglio	Under 40	SSD : MED/14 - Nefrologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Retina
Titolo : Indocyanine green angiographic findings for patients with systemic lupus erythematosus nephropathy.
Autore/i : Gharbiya M, Pecci G, Baglio V, Gargiulo A, Allievi F, Balacco-Gabrieli C.
Anno : 2006
Numero volume : 26
Pagine da - a : 159-164
Nome rivista o titolo libro o atti conferenza : Giornale Italiano di Nefrologia
Titolo : Choroidopathy in patients with systemic lupus erythematosus
Autore/i : PISTOLESI V, BAGLIO V, GHARBIYA M, CUOZZO G, CIMINELLI ME, GANGEMI C, DI FRANCO M, ACCOGLI A, POLISTENA F, ZEPPILLI L, MORABITO S, PIERUCCI A
Anno : 2011
Numero volume : 28
Pagine da - a : S 28
Nome rivista o titolo libro o atti conferenza : Journal of Nephrology
Titolo : Choroidopathy in patients with systemic lupus erythematosus with or without nephropathy
Autore/i : Veronica Baglio, Magda Gharbiya, Corrado Balacco-Gabrieli, Tommaso Mascaro, Concetta Gangemi, Manuela Di Franco, Valentina Pistolesi, Santo Morabito, Gabriella Pecci, Alessandro Pierucci
Anno : 2011
Numero volume : 24
Pagine da - a : 522-529
Issn : 1121-8428

MACROAREA : C

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Dipartimento : Medicina interna e specialità mediche

Type 2 diabetes: micro- and macrovascular complications and effects of the therapy

Complicanze micro-e macrovascolari del diabete di tipo 2 ed effetti del trattamento

Diabetic macro- and microvascular complications are being studied, in patients with type 2 diabetes. Moreover, we are investigating some conditions frequently associated with type 2 diabetes and its treatment. Preliminary data from a trial in collaboration with the most important Italian Universities, aiming to investigate the prevalence of diabetic nephropathy in Italy, have been published.

In particular the aims of the research projects were to evaluate 1) the effect of insulin on waist circumference and on airway responsiveness in diabetic patients; 2) the association between metabolic syndrome components and erectile dysfunction in obese patients without diabetes; 3) the effect of a poor metabolic control on HDL levels; 3) the effect of inhibition of 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase on some molecules involved in atherosclerosis associated to type 2 diabetes; .4) the effect of high transaminase levels on the oral hypoglycemic drug therapy failure in patients with type 2 diabetes; 5). the prevalence of normoalbuminuria and of glomerular filtration rate reduction in patients with type 2 diabetes.

Altri partecipanti alla ricerca

Giuseppe Pugliese	SSD : MED/13 - Endocrinologia
Sebastiano Filetti	SSD : MED/09 - Medicina interna
Andrea Lenzi	SSD : MED/13 - Endocrinologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : J Hypertens
Titolo : Clinical significance of nonalbuminuric renal impairment in type 2 diabetes.
Autore/i : Penno G, Solini A, Bonora E, Fondelli C, Orsi E, Zerbini G, Trevisan R, Vedovato M, Gruden G, Cavalot F, Cignarelli M, Laviola L, Morano S, Nicolucci A, Pugliese G; for the Renal Insufficiency And Cardiovascular Events (RIACE) Study Group.
Anno : 2011
Numero volume : 29 (9)
Pagine da - a : 1802-1809

Nome rivista o titolo libro o atti conferenza : Atherosclerosis
Titolo : The Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation provides a better definition of cardiovascular burden associated with CKD than the Modification of Diet in Renal Disease (MDRD) Study formula in subjects with type 2 diabetes.
Autore/i : Pugliese G, Solini A, Bonora E, Orsi E, Zerbini G, Giorgino F, Cavalot F, Pontiroli AE, Baroni MG, Morano S, Nicolucci A, Penno G
Anno : 2011
Numero volume : 218 (1)
Pagine da - a : 194-199

Nome rivista o titolo libro o atti conferenza : J Atheroscler Thromb.
Titolo : Atorvastatin Downregulates Monocyte CD36 Scavenger Receptor Expression And Nuclear NFkB Levels In Type 2 Diabetic Patients
Autore/i : Mandosi E, Fallarino M, Gatti A, Carnevale A, Rossetti M, Lococo E, Buchetti B, Lenti L, Morano S.
Anno : 2010
Numero volume : 17 (6)
Pagine da - a : 539-45

MACROAREA : C

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Dipartimento : Medicina interna e specialità mediche

Optimal dose of vitamin D to target sufficiency

La dose ottimale di vitamina D per il raggiungimento della sufficienza vitaminica

There is no consensus concerning the dose and best route of administration of vitamin D, in order to achieve the optimal range for vitamin D sufficiency.
We demonstrated that an oral load of cholecalciferol, immediately decreases PTH secretion without modifying serum calcium levels; this is probably related to residential transformation of calcitriol in the parathyroids glands. This modality of administration, even though is acceptable from a pharmacological point of view, has been recently questioned. Indeed, some reports showed that annual oral huge doses of the vitamin can paradoxically increase rather than decrease falls and fracture rate.
Therefore, other compounds or other routes of administration that are not characterized by such a significant abrupt increase of serum vitamin D levels may be desirable.
We therefore carried out a study by administering monthly calcidiol overcoming the problem of large fluctuations of serum vitamin D levels.
Another study is ongoing in order to explore the possibility that intramuscular injection of cholecalciferol may result in a slow increase of 25OHD, thus avoiding the problem of a massive delivery at the target tissues, as we previously reported.

Altri partecipanti alla ricerca

FRANCO MAZZEI SSD : CHIM/02 - Chimica fisica

Partner della ricerca

OSPEDALE "CASA SOLLIEVO DELLA SOFFERENZA", IRCCS, SAN GIOVANNI ROTONDO, FOGGIA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM
Titolo : Effect of a Single Oral Dose of 600,000 IU of Cholecalciferol on Serum Calciotropic Hormones in Young Subjects with Vitamin D Deficiency: A Prospective Intervention Study.
Autore/i : CIPRIANI C and ROMAGNOLI E and SCILLITANI A and CHIODINI I and CLERICO R and CARNEVALE V and MASCIA ML and BATTISTA C and VITI R and PILERI M and ELLER-VAINICHER C and MINISOLA S.
Anno : 2010
Numero volume : 95,
Pagine da - a : 4771--4777
Issn : 0021-972X
Nome rivista o titolo libro o atti conferenza : BONE
Titolo : Regulation of PTH secretion by 25-hydroxyvitamin D and ionized calcium depends on vitamin D status: A study in a large cohort of healthy subjects.
Autore/i : CARNEVALE V and NIEDDU L and ROMAGNOLI E and BATTISTA C and MASCIA ML and CHIODINI I and ELLER-VAINICHER C and FRUSCIANTE V and SANTINI SA and LA PORTA M and MINISOLA S. and SCILLITANI A
Anno : 2010
Numero volume : 47,
Pagine da - a : 626--630
Issn : 8756-3282

Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM
Nome rivista o titolo libro o atti conferenza : THE JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM
Titolo : Short and long term variations in serum calciotrophic hormones after a single very large dose of ergocalciferol (vitamin D2) or cholecalciferoL (vitamin D3) in the elderly.
Autore/i : ROMAGNOLI E and MASCIA M.L and CIPRIANI C and FASSINO V and MAZZEI F and D'ERASMO E and CARNEVALE V and SCILLITANI A and MINISOLA S.
Anno : 2008
Numero volume : 93,
Pagine da - a : 3015--3020
Issn : 0021-972X
Doi : 10.1210/jc.2008-0350

MACROAREA : C

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EFFICACY OF MUD-BATH THERAPY WITH SULPHATE-BICARBONATE-CALCIC-MAGNESIAC MINERAL WATER IN PATIENTS AFFECTED BY KNEE OSTEOARTHRITIS

EFFICACIA DELLA FANGOBALNEOTERAPIA CON ACQUA MINERALE SOLFATO-BICARBONATO-CALCICO-MAGNESIACA IN PAZIENTI CON OSTEOARTROSI DEL GINOCCHIO

This study was conducted to assess the efficacy of mud-bath therapy with sulphate-bicarbonate-calcic-magnesiac mineral water in patients with symptomatic OA of one or both knees. 61 patients were divided into 2 groups: group A underwent 3 cycles of mud-bath therapy over a year's time,group B did not. Clinical conditions, visual analogue scale pain ratings, and Lequesne Indexes of the 2 groups were compared. We also compared these same parameters in the patients of the two groups that were following the therapy with drugs and in the patients of the group A before and after spa treatment. The percentage of patients with no symptoms or mild symptoms was higher in group A than in group B. Within group A, this percentage was higher after treatment than before spa therapy. Even in the comparison betwen the patients of the two groups that were following the therapy with drug, the results was that in group A the percentage of patients with no symptoms or mild symptoms was higher than in group B. All these differences were highly significant. No adverse effects were observed in any of the patients in group A. The mud-bath therapy performed remarkably improves the clinical conditions of patients with gonarthrosis and significantly reduces the frequency and severity of symptoms.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : RHEUMATOLOGY INTERNATIONAL
Titolo : A Study on the efficacy of treatment with mud packs and baths with Sillene mineral water (Chianciano Spa Italy) in patients suffering from knee osteoarthritis
Autore/i : FRAIOLI A. and SERIO A and MENNUNI G and CECCARELLI F and PETRACCIA L and FONTANA M and GRASSI M and VALESINI G
Anno : 2010
Numero volume : -
Pagine da - a : --
Issn : 0172-8172
Doi : 10.1007/s00296-010-1475-5
Nome rivista o titolo libro o atti conferenza : LA CLINICA TERAPEUTICA
Titolo : Efficacy of mud-bath therapy with Mineral Water from the Sillene spring at Italy's Chianciano Spa for osteoarthritis of the knee: A clinical statistical study

Nome rivista o titolo libro o atti conferenza : RHEUMATOLOGY INTERNATIONAL
Autore/i : FRAIOLI A. and SERIO A and MENNUNI G and CECCARELLI F and PETRACCIA L and CAMPANELLA J and FONTANA M and NOCCHI S and TANZI G and GRASSI M and VALESINI G
Anno : 2009
Numero volume : 160,
Pagine da - a : E63--E74
Issn : 0009-9074
Nome rivista o titolo libro o atti conferenza : LA CLINICA TERAPEUTICA
Titolo : Spa therapy in osteoarthritis: experience in Cervia
Autore/i : MENNUNI G, DI FRANCO M, PETRACCIA L, BIETTA P, LUCCHETTA MC, MALKOWSKI ML, ZINGARINI A, FONTANA M, NOCCHI S, SCARNO A, TANZI G, VALESINI G, FRAIOLI A.
Anno : 2009
Numero volume : 160
Pagine da - a : 115--119
Issn : 0009-9074

MACROAREA : C

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Anti-tissue transglutaminase antibodies in acute coronary syndrome: an alert signal of myocardial tissue lesion?

Gli anticorpi anti-transglutaminasi tissutale nella sindrome coronarica acuta: un segnale di allerta di lesione del tessuto miocardico?

Since tissue transglutaminase (tTG) is widely involved in the pathophysiology of cardiovascular system, and anti-tTG may be present in serum of patients with end-stage heart failure, our aim was to evaluate the role of these antibodies in both acute and chronic cardiac disorders.
Forty-one patients with acute coronary syndrome (ACS) and 39 with dilated cardiomyopathy (DCM) were recruited. Circulating anti-tTG were tested by an enzyme-linked immunosorbent assay (ELISA).
Anti-tTG were detectable in more than half of ACS and in almost 90% of DCM patients. In ACS patients, anti-tTG reached a peak at 30 days from the cardiac event, were dependent on the immunological memory, and were related to the severity/extent of the myocardial tissue lesion.
Data have allowed the elaboration of a pathogenetic model. In detail, the injured myocardium may be source of tTG antigen resulting in the formation of anti-tTG antibodies that in turn, by neutralizing tTG enzyme activity, could promote impaired myocardial wound healing contributing to a chronic disorder such as DCM. If this is true, anti-tTG may be used to monitor the ACS patients, in whom they could assume a prognostic significance. Further studies are underway to better clarify the biological and clinical role of anti-tTG in ACS.

Altri partecipanti alla ricerca

Francesco Barillà		SSD : MED/11 - Malattie dell'apparato cardiovascolare
Carlo Gaudio		SSD : MED/11 - Malattie dell'apparato cardiovascolare
Hayat Francesca Palumbo	Under 40	SSD : MED/12 - Gastroenterologia
Antonio Picarelli		SSD : MED/12 - Gastroenterologia
Massimo Trappolini		SSD : MED/09 - Medicina interna

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Internal Medicine

Titolo : Antitissue transglutaminase antibodies in acute coronary syndrome: an alert signal of myocardial tissue lesion? (Original Article)

Autore/i : Di Tola M, Barillà F, Trappolini M, Palumbo HF, Gaudio C, Picarelli A.

Anno : 2008

Numero volume : 263 (1)

Pagine da - a : 43 - 51

Issn : 0954-6820

Doi : 10.1111/j.1365-2796.2007.01881.x

Nome rivista o titolo libro o atti conferenza : Journal of Internal Medicine

Titolo : Antibodies to tissue transglutaminase: an immune link between the gut, the coronaries and the myocardium? (Editorial Comment)

Autore/i : Sane DC.

Anno : 2008

Numero volume : 263 (1)

Pagine da - a : 1 - 3

Issn : 0954-6820

Doi : 10.1111/j.1365-2796.2007.01882.x

Nome rivista o titolo libro o atti conferenza : Joyce E. Mandell Ed: Ventricular fibrillation and acute coronary syndrome

Titolo : Chapter 6 - Tissue transglutaminase enzyme and anti-tissue transglutaminase antibodies: implication for acute coronary syndrome.

Autore/i : Di Tola M, Picarelli A.

Anno : 2011

Pagine da - a : 139 - 158

Isbn : 978-1-61728-969-9

MACROAREA : C

Raffaella Buzzetti

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Dipartimento : Medicina interna e specialità mediche

Identification and characterization of two new sub-groups of autoimmune diabetes

Identificazione e caratterizzazione di due nuovi sottogruppi di diabete autoimmune

Latent autoimmune diabetes in adults is a recently defined form of diabetes characterized by the presence of autoimmunity (mainly glutamic acid decarboxylase antibodies GADA), in subjects with a clinical and biochemical phenotype of type 2 diabetes (T2DM). The aim of the present study was to identify and characterized this form of diabetes in Italian population. Patients enrolled in the study were screened for GADAs and protein tyrosine phosphatase (IA-2). Of 4,250 consecutive T2DM patients, 4.5% had either GADAs and/or IA-2As. Analyzing the GADA titer, we identified, for the first time, two subgroups of patients with high (>32 GADA units) and low (≤32 GADA units) GADA titers respectively. The two groups were significantly different in term of genetic (HLA DRB1-DQB1 and PTPN22 genes), autoimmune, biochemical and clinical features. Compared with those with low GADA titers, patients with high GADA titers had more prominent traits of insulin deficiency and a Profile of more severe autoimmunity resulting in higher A1C, lower BMI, a lower prevalence of metabolic syndrome and its components ($p<0.02$ for all), a higher prevalence of IA-2As, TPO antibodies ($p<0.003$ for both). This finding opens new perspectives in the diagnosis and treatment of autoimmune diabetes in adults.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Diabetes Care

Titolo : Non Insulin Requiring Autoimmune Diabetes Study Group. High titer of autoantibodies to GAD identifies a specific phenotype of adult-onset autoimmune diabetes.

Autore/i : Buzzetti R, Di Pietro S, Giaccari A, Petrone A, Locatelli M, Suraci C, Capizzi M, Arpi ML, Bazzigaluppi E, Dotta F, Bosi E and the NIRAD study group

Anno : 2007

Numero volume : 30

Pagine da - a : 932-938

Nome rivista o titolo libro o atti conferenza : Diabetes Care

Titolo : The protein tyrosine phosphatase nonreceptor 22 (PTPN22) is associated with high GAD antibody titer in latent autoimmune diabetes in adults: Non Insulin Requiring Autoimmune Diabetes (NIRAD) Study 3.

Autore/i : Petrone A, Suraci C, Capizzi M, Giaccari A, Bosi E, Tiberti C, Cossu E, Pozzilli P, Falorni A, Buzzetti R; NIRAD Study Group.

Anno : 2008

Numero volume : 31

Pagine da - a : 534-538

Nome rivista o titolo libro o atti conferenza : Diabetes Care

Titolo : Zinc transporter 8 antibodies complement GAD and IA-2 antibodies in the identification and characterization of adult-onset autoimmune diabetes: Non Insulin Requiring Autoimmune Diabetes (NIRAD) 4

Autore/i : Lampasona V, Petrone A, Tiberti C, Capizzi M, Spoletini M, di Pietro S, Songini M, Bonicchio S, Giorgino F, Bonifacio E, Bosi E, Buzzetti R; Non Insulin Requiring Autoimmune Diabetes (NIRAD) Study Group

Anno : 2010

Numero volume : 33

Pagine da - a : 104-108

MACROAREA : C

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Under 40

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Dipartimento : Neurologia e psichiatria

STRESS AND WORKERS

STRESS E LAVORATORI

- Compared to VDU operators, kindergarten teachers perceive as more stressful their condition of responsibility in taking independent decisions and in autonomously managing their work.When appropriate comparisons are performed between groups of workers operating under different occupational conditions, it is possible to identify, using an ad hoc questionnaire, different sources of occupational stress which are effective in the work environment of different categories of female workers.

- The aim of this study was to assess subjective stress in the municipal police force of a large Italian city by administering the Rapid Stress Assessment (RSA) Scale, a self-rated tool, in order to identify any possible differences between the start and the end of the shift.The results could be taken to mean that the stressors have, throughout the working day, an ¿exhausting¿ effect and the subject feels ¿down¿, despite having finished his/her work for the day.

-We carried out an evaluation of the subjective components of stress in a working population of 60 subjects employed in a large Public Service, 30 Video Display Terminal (VDT) workers and 30 office-workers not assigned to VDT.
VDT workers of both sexes showed higher total stress score vs. office workers (respectively $p<0.05$, $p<0.05$).

Altri partecipanti alla ricerca

FRANCESCO TOMEI		SSD : MED/44 - Medicina del lavoro
ZAIRA TASCIOTTI	Under 40	SSD : MED/44 - Medicina del lavoro
MARIA PIA SCHIFANO	Under 40	SSD : MED/44 - Medicina del lavoro
ANGELA SANCINI	Under 40	SSD : MED/44 - Medicina del lavoro
MANUELA CIARROCCA	Under 40	SSD : MED/44 - Medicina del lavoro
MARIA VALERIA ROSATI		SSD : MED/44 - Medicina del lavoro

Partner della ricerca

MEDICINA OCCUPAZIONALE - SAPIENZA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Stress and Health
Titolo : Assessment of subjective stress in the municipal police force at the start and at the end of the shift.
Autore/i : TOMEI G., CHERUBINI E., CIARROCCA M., BIONDI M., ROSATI M.V., TARSITANI L., CAPOZZELLA A., MONTI C., TOMEI F.
Anno : 2006
Numero volume : 22(4)
Pagine da - a : 239-247
Nome rivista o titolo libro o atti conferenza : Industrial Health
Titolo : Assessment of subjective stress in video display terminal workers.
Autore/i : TOMEI G., ROSATI M.V., MARTINI A., TARSITANI L., BIONDI M., PANCHERI P., MONTI C., CIARROCCA M., CAPOZZELLA A., TOMEI F.
Anno : 2006
Numero volume : 44(2)
Pagine da - a : 291-295
Nome rivista o titolo libro o atti conferenza : European Journal of Inflammation
Titolo : Stress characteristics in different work conditions: is it possible to identify specificity of risk factors by the questionnaire method?
Autore/i : SANCINI A., SCHIFANO M.P., DI GIORGIO V., CACIARI T., FIASCHETTI M., SCIMITTO L., CETICA C., TOMEI F., FIORAVANTI M., TOMEI G.
Anno : 2010
Numero volume : 8(2)
Pagine da - a : 117-23

MACROAREA : C

Valentina Tomassini

Under 40
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Dipartimento : Neurologia e psichiatria

Diffusion-weighted imaging tractography-based parcellation of the human lateral premotor cortex identifies dorsal and ventral subregions with anatomical and functional specializations

La parcellizzazione della corteccia premotoria laterale umana con trattografia basata sulla diffusione identifica sottoregioni dorsali e ventrali con specializzazioni anatomiche e funzionali

The development of effective strategies to enhance functional recovery after brain damage demands an improved understanding of the functional anatomy of relevant brain networks so that they can be targetted by therapeutic

interventions. The lateral premotor cortex (PM) is a key region for motor recovery. Our current understanding of its functional anatomy, however, is based on tracer studies in primates, where PM can be segregated into structurally and functionally distinct subregions, including a major division between dorsal (PMd) and ventral (PMv) parts, with distinct cytoarchitecture, function and patterns of connectivity with other cortical areas.
Here we use tractography based on diffusion imaging to identify non-invasively a reproducible border between the two major PM subregions in the human brain. We demonstrate that these subregions have a distinctive pattern of connectivity with frontal cortex and lateral parietal cortex, suggesting that they correspond to human PMd and PMv. The border between our PMd/PMv corresponds closely to the location of a functional border defined using previous functional imaging studies. Our results facilitate targetted therapeutic interventions in the individual subject. Other complex cortical regions can benefit of the same approach.

Altri partecipanti alla ricerca

Carlo Pozzilli SSD : MED/26 - Neurologia

Partner della ricerca

The University of Oxford, United Kingdom

Brevetti

Not applicable

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Cereb Cortex
Titolo : Distinct and overlapping functional zones in the cerebellum defined by resting state functional connectivity
Autore/i : O'Reilly JX, Beckmann CF, Tomassini V, Ramnani N, Johansen-Berg H
Anno : 2010
Numero volume : 20(4)
Pagine da - a : 953-65.
Doi : 10.1093/cercor/bhp157
Nome rivista o titolo libro o atti conferenza : J Neurosci
Titolo : Diffusion-weighted imaging tractography-based parcellation of the human parietal cortex and comparison with human and macaque resting-state functional connectivity
Autore/i : Mars RB, Jbabdi S, Sallet J, O'Reilly JX, Croxson PL, Olivier E, Noonan MP, Bergmann C, Mitchell AS, Baxter MG, Behrens TE, Johansen-Berg H, Tomassini V, Miller KL, Rushworth MF.
Anno : 2011
Numero volume : 31(11)
Pagine da - a : 4087-100
Doi : 10.1523/
Nome rivista o titolo libro o atti conferenza : Hum Brain Mapp
Titolo : Structural and functional bases for individual differences in motor learning
Autore/i : Tomassini V, Jbabdi S, Kincses ZT, Bosnell R, Douaud G, Pozzilli C, Matthews PM, Johansen-Berg H.
Anno : 2011
Numero volume : 32(3)
Pagine da - a : 494-508.
Doi : 10.1002/hbm.21037

MACROAREA : C

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Modification of lymphocyte subsets in patients with rhinoscleroma.

Modifiche del subset linfocitario in pazienti con rinoscleroma.

PURPOSE: Rhinoscleroma is a rare, chronic, granulomatous disorder of the upper airways. This disease presents some etiopathogenetic aspects that are not yet clear. Infection by Klebsiella rhinoscleromatis is fundamental for the onset of the disease, but it is impossible to reproduce rhinoscleroma experimentally only via infection with the bacteria both in man and in animals. Furthermore, this disease mainly affects blood-related people and occurs in certain geographic areas. In this context, we present a study that brings to light some of the quantitative abnormalities of the lymphocyte subsets.

MATERIALS AND METHODS: The study group consisted of 5 patients with rhinoscleroma. The following parameters were studied for each patient: clinical manifestations, histologic examinations, number of leukocytes, lymphocytes, and lymphocyte subsets.

RESULTS: In all patients, we noted the following: There was a relative reduction of the CD4+ cells, an absolute increase of the CD8+ cells, and an inversion of the CD4+/CD8+ ratio. There was an absolute increase of the CD56+ cells and cytotoxic cells that coexpress CD8+CD56+ antigens. There was a relative reduction of the CD3+ cells, and the CD19+ cells tended to show an ambiguous behavioral pattern.

CONCLUSION: We believe that K. rhinoscleromatis does not play a major role in the etiopathogenesis of rhinoscleroma. However, we do believe that the anomalous behavior of the immune system can favor rhinoscleroma.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : American Journal of Otolaryngology
Titolo : Modification of lymphocyte subsets in patients with rhinoscleroma.
Autore/i : Fusconi M, Pulice G, Ippoliti F, Mastronicola R, Ralli G, de Vincentiis M
Anno : 2006
Numero volume : 27
Pagine da - a : 401-405
Nome rivista o titolo libro o atti conferenza : Otolaryngology - Head and Neck Surgery
Titolo : B lymphocyte subsets in patients with rhinoscleroma.
Autore/i : Fusconi M, Gallo A, De Virgilio A, Natalizi S, Greco A, Zambetti G, de Vincentiis M.
Anno : 2011
Numero volume : 144
Pagine da - a : 809-814

MACROAREA : C

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PHOSPHOLIPASE C BETA1 GENE DELETION IN MOOD DISORDERS

DELEZIONI DELE GENE PLCB1 IN PATOLOGIE PSICHIATRICHE

In mood disorders multiple deficits, including cell atrophy and loss, were observed in the cortex of affected patients and in experimental animal models, as well as numerous changes in gene expression and activity. Different signaling pathways play a role in mood disorders, namely the cAMP, phosphoinositides (PI), MAP kinase, and glycogen synthase

kinase cascades. The therapeutic effect of lithium was supposed to be due to the reduction of phosphatidylinositol-specific phospholipase C (PI-PLC) and adenylate cyclase activities. Brain regionally selective deficits in G-protein function associated with PI signaling were described in subjects presenting with major depression. Abnormalities in nerve cell myo-inositol levels, which are strictly related to the PI-cycle, seem to be involved in the pathophysiology of mood disorders. In particular, a role for PI-PLC b1 was suggested. Following the observation of approximately 50% concordance rate in monozygotic twins for schizophrenia, suggesting genetic predisposition affecting neurodevelopmental processes combined with environmental risk factors, we analyzed the gene codifying for PI-PLC b1 enzyme by using I-FISH methodology. In our previous study we found deletions of PLCB1 in orbit

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF CELLULAR AND MOLECULAR MEDICINE
Titolo : Deletion of PLCB1 gene in schizophrenia affected patients.
Autore/i : LO VASCO V. and CARDINALE G and POLONIA P
Issn : 1582-1838
Doi : 10.1111/j.1469-445X.2011.01363.x.
Nome rivista o titolo libro o atti conferenza : JOURNAL OF CELL COMMUNICATION AND SIGNALING
Titolo : Signalling in the genomic era
Autore/i : LO VASCO V.
Anno : 2010
Numero volume : 4(3)
Pagine da - a : 115--117
Issn : 1873-9601
Doi : 10.1007/s12079-010-0091-1
Nome rivista o titolo libro o atti conferenza : LEUKEMIA
Titolo : Reply to Herens et al
Autore/i : LO VASCO V. and FOLLO MY and COCCO L
Anno : 2006
Numero volume : 20(4)
Pagine da - a : 755,
Issn : 0887-6924
Doi : 10.1038/sj.leu.2404108

MACROAREA : C

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Is Biofilm the cause of chronic external otitis?

E' il Biofilm la causa dell'otite esterna cronica?

Introduction: Chronic otitis externa (COE) is a relapsing disease for which current medical options prove ineffective. Over the last decade, we perfected a safe and simple therapeutic technique for the management of COE called Chemical Ear Peeling (CEP). The procedure allows the debridement of the infected external auditory canal.
Materials and methods: We performed a prospective controlled study articulated in 2 phases: in the first phase, we treated patients affected by (COE) with CEP or antibiotic/steroid treatment in order to compare the clinical and microbiological outcomes. In the second phase, we compared the microscopic findings observed in CEP samples of patients affected by COE exacerbations or by acute otitis externa in order to demonstrate the role of biofilm in the pathogenesis of chronic otitis externa.

Results: Phase 1: the disease control rate yielded markedly better results when treated with Chemical Ear Peeling. Phase 2: biofilms were identified in 23 of the 25 patients with COE exacerbation (92%) and in only 3 acute external otitis cases (20%).
Conclusions: Chemical Ear Peeling is a simple and effective method for the treatment of the chronic external otitis. The removal of the bacterial biofilm has a high correlation with a long-term clinical remission.

Altri partecipanti alla ricerca

Armando De Virgilio	Under 40	SSD : MED/31 - Otorinolaringoiatria
Andrea Gallo		SSD : MED/31 - Otorinolaringoiatria
Marco de Vincentiis		SSD : MED/31 - Otorinolaringoiatria

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Otolaryngology, Head and Neck Surgery.
Titolo : Biofilm presence in humans with chronic suppurative otitis media.
Autore/i : Lee MR, Pawlowski KS, Luong A, Furze AD, Roland PS.
Anno : 2009
Numero volume : 141
Pagine da - a : 567-571
Issn : 0194-5998
Doi : 10.1016/j.otohns.2009.08.010
Nome rivista o titolo libro o atti conferenza : Clinical Otolaryngology
Titolo : Chemical ear peeling: a simple technique for the treatment of chronic external otitis
Autore/i : Fusconi M, Chiarini F, Taddei AR, De Virgilio A, Gallinelli C, Conte M, de Vincentiis M.
Anno : 2010
Numero volume : 35
Pagine da - a : 424-429
Issn : 1749-4486
Doi : 10.1111/j.1749-4486.2010.02179.x
Nome rivista o titolo libro o atti conferenza : Laryngoscope.
Titolo : Biofilms in ear, nose, and throat infections: how important are they?
Autore/i : Vlastarakos PV, Nikolopoulos TP, Maragoudakis P, Tzagaroulakis A, Ferekidis E.
Anno : 2007
Numero volume : 117
Pagine da - a : 668-673
Issn : 1531-4995
Doi : 10.1097/MLG.0b013e318030e422

MACROAREA : C

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Cardiovascular risk in children with nonalcoholic fatty liver disease

Rischio cardiovascolare nel bambino con steatosi epatica

Nonalcoholic fatty liver disease (NAFLD) has become the most common cause of chronic liver disease in children and adolescents. The recent rise in the prevalence rates of overweight and obesity likely explains the NAFLD epidemic worldwide. NAFLD has been consistently found to be associated with features of the metabolic syndrome (MS), a highly

atherogenic condition, and this has stimulated interest in the possible role of NAFLD in the development of atherosclerosis.
We first showed that obese children with NAFLD have impaired flow-mediated vasodilatation and increased carotid artery intimal medial thickness - two reliable markers of subclinical atherosclerosis- compared to obese children without NAFLD independently of other cardiovascular risk factors and MetS, and that obese children exhibit more functional and morphologic vascular changes than healthy lean controls, regardless of liver involvement.
Conclusion: The presence of liver disease entails more severe functional and anatomic changes in the arterial wall. Therefore, the rising prevalence of obesity related MS and NAFLD in childhood may lead to a parallel increase in adverse cardiovascular outcomes. In children, the cardiovascular system remains plastic and damage-reversible if early and appropriate interventions are established effectively. Therapeutic goals for NAFLD should address nutrition and physical activity, to prevent not only endstage liver disease but also CVD.

Altri partecipanti alla ricerca

Caterina Anania		SSD : MED/38 - Pediatria generale e specialistica
Vito Cantisani	Under 40	SSD : MED/36 - Diagnostica per immagini e radioterapia
John Osborn		SSD : MED/42 - Igiene generale e applicata

Partner della ricerca

Consiglio Nazionale delle Ricerche

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : WORLD JOURNAL OF GASTROENTEROLOGY
Titolo : Pediatric nonalcoholic fatty liver disease, metabolic syndrome and cardiovascular risk
Autore/i : PACIFICO L. and NOBILI V and ANANIA C and VERDECCHIA P and CHIESA C
Anno : 2011
Numero volume : 17,
Pagine da - a : 1--10
Issn : 1007-9327
Doi : 10.3748/wjg.v17.i10.
Nome rivista o titolo libro o atti conferenza : HEPATOLOGY
Titolo : Functional and morphological vascular changes in pediatric nonalcoholic fatty liver disease.
Autore/i : PACIFICO L. and C. ANANIA and F. MARTINO and V. CANTISANI and R. PASCONE and A. MARCANTONIO and C. CHIESA
Anno : 2010
Numero volume : 52,
Pagine da - a : 1643--1651
Issn : 0270-9139
Doi : 10.1002/HEP.23890
Nome rivista o titolo libro o atti conferenza : PEDIATRIC RESEARCH
Titolo : Nonalcoholic fatty liver disease and carotid atherosclerosis in children
Autore/i : PACIFICO L. and CANTISANI V and RICCI P and OSBORN JF and SCHIAVO E and ANANIA C and FERRARA E and DVISIC G and CHIESA C
Anno : 2008
Numero volume : 63,
Pagine da - a : 423--427
Issn : 0031-3998
Doi : 10.1203/PDR.0B013e318165b8e7

MACROAREA : C

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EPYGENIC THERAPY OF CONGENITAL DIARRHEAL DISORDERS

TERAPIA EPIGENETICA DELLA DIARREA CONGENITA

Congenital diarrheal disorders, being rare and difficult to diagnose, represent one of the most challenging clinical conditions in pediatric clinical practice. Congenital chloride losing diarrhea (CLD) is a typical clinical model of these disorders. CLD is caused by mutations in the gene SLC26A3 that encodes epithelial ions exchanger for Cl- and HCO3-. Malabsorption of Cl- leads to a severe life-long diarrhea. Recently we have demonstrated the efficacy of Butyrate in a child with CLD (Gastroenterol 2004). We hypothesized that butyrate regulated SLC26A3 by epigenetic mechanism. Methods. We performed molecular diagnosis of CLD in 24 children. Among this large population, we select subjects carrying the 4 more common mutations observed on SLC26A3: missense, nonsense, ins/deletion, and splicing alterations. We test butyrate in in-vivo and in-vitro conditions. We perform a clinical trial with oral butyrate. In addition we performed studies of expression and prediction of function of SLC26A3, using cloning, mutagenesis and RT-PCR techniques on cultures of cells obtained from the patients. Results and Conclusions. Butyrate elicited an epigenetic effect on SLC26A3 that depend by genotype. This researches provide important insight in the pathogenesis of diarrheal disorders

Altri partecipanti alla ricerca

Roberto Berni Canani	SSD : MED/38 - Pediatria generale e specialistica
Massimo Moscarini	SSD : MED/40 - Ginecologia e ostetricia
Giuseppe Castaldo	SSD : BIO/12 - Biochimica clinica e biologia molecolare clinica
Mario De Curtis	SSD : MED/38 - Pediatria generale e specialistica

Partner della ricerca

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CEINGE, Napoli
Dipartimento di Farmacologia, Università degli Studi di Napoli "Federico II"

Brevetti

Derivato Amidico del Butirrato (RM 2008, A 000214)
BuBUL
World Intellectual Property Organization n°WO 2009/ 130735

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : J Pediatr?
Gastroenterol Nutr
Titolo : Congenital
diarrheal disorders: improved understanding of gene defects is leading to
advances in intestinal physiology and clinical management
Autore/i : Berni Canani R, Terrin G, Cardillo G, Tomaiuolo R, Castaldo G
Anno : 2010
Numero volume : 50
Pagine da - a : 360-366

Nome rivista o titolo libro o atti conferenza : J Pediatr?
Gastroenterol Nutr
Nome rivista o titolo libro o atti conferenza : Curr?
Gastroenterol Rep
Titolo : Recent progress in congenital diarrheal disorders
Autore/i : Canani RB, Terrin G
Anno : 2011
Numero volume : 13
Pagine da - a : 257-264
Nome rivista o titolo libro o atti conferenza : World J Gastroenterol
Titolo : Diarrhea in neonatal intensive care unit
Autore/i : Passariello A, Terrin G, Baldassarre ME, De Curtis M, Paludetto R, Berni
Canani R
Anno : 2010
Numero volume : 7
Pagine da - a : 2664-2668

MACROAREA : C

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Anatomical Lymph Node Mapping in Normal Mesorectal Adipose Tissue

Nuove acquisizioni sull'anatomia normale linfatica del mesoretto

The aim of this study was to provide a basis for improving lymph node
assessment by defining the number, shape, and distribution
of all lymphatic structures in the mesorectum.
Cadavers from 6 males and 6 females who died from causes other than colorectal pathologies were studied. Rectum and mesorectum were excised en bloc. The adipose tissue was separated from the rectum and divided into 9 sections before fixing the
specimen in paraffin. Slides were analyzed with an optical microscope, and identified lymph nodes were counted.
No evidence of previous history of premortal colorectal process was found. A total of 412 lymph nodes were identified, with a mean of 34.3 lymph nodes per cadaver. The mean number of lymph nodes differed significantly across
levels of the mesorectum, with 22.2 lymph nodes in the upper, 9.8 in the middle, and 2.3 in the lower sections; 266 (64.6%) of all lymph nodes were located in the upper third of the mesorectum. Distribution density was higher in the proximal posterior sections.
Node diameter was less than 5 mm in 330 (80%) of 412 nodes.
More than 30 lymph node units normally exist in the mesorectal area. Staging
of rectal cancer might be improved by counting more than 12 lymph nodes per specimen.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : DISEASES OF THE COLON & RECTUM
Titolo : Anatomical Lymph Node Mapping in Normal Mesorectal Adipose Tissue
Autore/i : Giandomenico Miscusi, Cira R. T. di Gioia, Gregorio Patrizi, Aviad Gravetz, Adriano Redler, Vincenzo Petrozza
Anno : 2010
Numero volume : VOLUME 53: 12 (2010)

Nome rivista o titolo libro o atti conferenza : DISEASES OF THE COLON & RECTUM
Pagine da - a : 1640-4
Issn : 0012-3706
Isbn : 00123706
Doi : DOI: 10.1007/DCR.0b013e3181f48f90

MACROAREA : C

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DETERMINATION OF THE INFLAMMATORY PATTERN IN PROSTATE CANCER (PC) CELL LINES (LnCaP and PC3) AND IN PRIMARY CELL CULTURES OF HUMAN PC

VALUTAZIONE DEI FATTORI INFIAMMATORI IN LINEE CONTINUE DI CELLULE PROSTATICHE LNCaP E PC3 E IN COLTURE PRIMARIE DI CELLULE DERIVATE DA ADENOCARCINOMA PROSTATICO UMANO

INTRODUCTION:Evidences in literature suggest that prostatic inflammation is involved in the pathogenesis and progression of prostatic diseases, such as benign prostatic hyperplasia (BPH) and prostate cancer (PC).The aim of our research was to analyse and to compare the expression of the inflammatory pathways and the proliferative-apoptotic indexes either in classic human PC cell lines, such as androgen-dependent LnCap and androgen-independent PC3 cell lines or also in primary cultures of human prostate adenocarcinoma cells.
MATERIALS ANS METHODS:We homogeneously analysed the mRNA expression of several genes related to inflammation:IL-6,CCL-5(RANTES),CCL-2,COX-1,COX-2,iNOS in LnCaP and PC3 cell lines and primary cultures obtained from patients undergoing radical prostatectomy for PC.RESULTS:All related-inflammation genes analysed were expressed either in PC3 cell line and primary cultures. Instead,we observed different results in LNCAP cell line that expressed only iNOS and CCL-2 probably related to different origin and androgen-sensibility too.CONCLUSIONS:The present research confirmed the role of inflammation in prostate carcinogenesis and supports the concept that prolonging inflammation can enhance the development and progression of PC.

Altri partecipanti alla ricerca

Ida Silvestri SSD : MED/04 - Patologia generale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : European urology
Titolo : Inflammation and chronic prostatic diseases: evidence for a link?
Autore/i : Sciarra A, Di Silverio F, Salciccia S, Autran Gomez AM, Gentilucci A, Gentile V.
Anno : 2007
Numero volume : Oct;52(4)
Pagine da - a : 964-72
Issn : 0302-2838
Nome rivista o titolo libro o atti conferenza : Cancer Investigation
Titolo : Magnetic resonance spectroscopic imaging (1H-MRSI) and dynamic contrast enhanced magnetic resonance (DCE-MRI): pattern changes from inflammation to prostate cancer.
Autore/i : Sciarra A, Panebianco V, Ciccariello M, Salciccia S, Lisi D, Osimani M,
Alfarone A, Gentilucci A, Parente U, Passariello R, Gentile V.
Anno : 2010
Numero volume : 28(4)

Nome rivista o titolo libro o atti conferenza : European urology
Pagine da - a : 424-32.
Issn : 0735-7907
Nome rivista o titolo libro o atti conferenza : The Journal of Steroid Biochemistry and Molecular Biology?
Titolo : Prostate growth and inflammation.
Autore/i : Sciarra A, Mariotti G, Salciccia S, Gomez AA, Monti S, Toscano V, Di Silverio F.
Anno : 2008
Numero volume : 108(3-5)
Pagine da - a : 254-260
Issn : 0960-0760

MACROAREA : C

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Non-surgical periodontal therapy assisted
by potassium¿titanyl¿phosphate laser: a pilot study
Terapia parodontale non chirurgica assistita dal laser al potassio-titanio-fosfato:studio pilota

As the American Academy of Periodontology indicates, the treatment of chronic periodontitis should be achieved in the least invasive manner through non -surgical periodontal therapy. However, complete removal of subgingival plaque and calculus is hindered with increasing of probing depth (PD) and furcation involvement using hand, sonic or ultrasonic instruments. Many authors have suggested that the use of laser as an adjunct to Scaling and Root Planing (SRP) may improve the effectiveness of conventional periodontal treatment. The aim of this study was to evaluate KTP (potassium-¿titanyl¿phosphate) laser in non-surgical periodontal therapy. Seven hundred and thirty sites with probing depth of 4¿6 mm were involved in the study. The sites were divided into four groups: control (SRP, Chlorhexidine gel 0,.5%), group A (SRP, Chlorhexidine gel 0,.5%, three sessions of KTP laser irradiations; group B (SRP, three sessions of KTP laser irradiations) and group C (SRP, irrigation with povidone -iodine 10%, 3three sessions of KTP laser irradiations). KTP laser was used with the following parameters: output power: 0.6 W, Time on: 10 ms, Time off 50 ms, 30 sec. per irradiation, fluence 19 J/cm2. All the sites showed improvement of all clinical parameters. Clinical attachment loss (CAL), pocket probing depths (PPDs) and bleeding on probing (BOP), especially in the lased groups, showed significant results ($P < 0.001$). Our experience showed KTP laser as a significant help in SRP; nevertheless, more studies are necessary to confirm the results.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Lasers in Surgery and Medicine
Titolo : Analysis in vitro of periincisional theraml effects in oral soft tissues induced by KTP laser
Autore/i : Romeo U, Del Vecchio A, Kornblit R, Palaia G, Tenore G, Nammour S, De Luca M, Polimeni A
Anno : 2010
Numero volume : 22 suppl
Pagine da - a : 50-50
Issn : 0196-8092
Nome rivista o titolo libro o atti conferenza : Lasers in Medical Science
Titolo : Non-surgical periodontal therapy assisted
by potassium?titanyl?phosphate laser: a pilot study
Autore/i : Umberto Romeo, Gaspare Palaia, Ricciarda Botti,
Valentina Leone, Jean-Paul Rocca, Antonella Polimeni

Nome rivista o titolo libro o atti conferenza : Lasers in Surgery and Medicine
Anno : 2010
Numero volume : 25 (6)
Pagine da - a : 891-899
Issn : 0268-8921
Doi : 10.1007/s10103-009-0738-4

MACROAREA : C

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Mitochondrial biogenesis and oxidative stress in the natural history of mitochondrial cardiomyopathies
Ruolo della biogenesi mitocondriale e dello stress ossidativo nella storia naturale delle cardiomiopatie mitocondriali

Mitochondrial biogenesis is a common phenomenon in OXPHOS disorders that has been demonstrated to play a compensatory role, at least in skeletal muscle. However, this phenomenon may have a detrimental effect in cardiac muscle. The molecular events linking mitochondrial biogenesis to adverse cardiac remodeling are unknown. Possible mechanisms include mechanical interference of proliferated mitochondria with sarcomeric function, or increased mitochondrial derived oxidative stress. We analyzed markers of mitochondrial biogenesis, ROS production, antioxidant enzymes expression and activity, and oxidative stress in myocardial samples from patients with genetically proven MIC, as compared to cardiomyopathies of different etiology. According to our results, mitochondrial biogenesis in MIC contributes to increased myocardial mass and possibly interferes mechanically with sarcomeric contraction. In the end-stage phase, MIC shows increased oxidative stress of mitochondrial origin, not paralleled with induction of the antioxidant manganese superoxide activity. Thus, besides energy Thus, besides energy deficiency, mitochondrial biogenesis and mitochondrially-derived oxidative stress play a role in adverse cardiac remodeling in MIC.

Altri partecipanti alla ricerca

Giordano Carla	SSD : MED/08 - Anatomia patologica
Pietro Gallo	SSD : MED/08 - Anatomia patologica

Partner della ricerca

Mitochondrial Research Group, Institute for Ageing and Health, Newcastle University, Newcastle-upon-Tyne, UK
Università di Firenze

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : BIOCHIMICA ET BIOPHYSICA ACTA. MOLECULAR BASIS OF DISEASE
Titolo : Enhanced ROS production by NADPH oxidase is correlated to changes in antioxidant enzyme activity in human heart failure
Autore/i : BORCHI E and BARGELLI V and STILLITANO F and GIORDANO C and SEBASTIANI M and NASSI PA and D'AMATI G. and CERBAI E and NEDIANI C
Anno : 2010
Numero volume : 1802,
Pagine da - a : 331--338
Issn : 0925-4439
Doi : 10.1016/j.bbadis.2009.10.014
Nome rivista o titolo libro o atti conferenza : JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY

Nome rivista o titolo libro o atti conferenza : BIOCHIMICA ET BIOPHYSICA ACTA. MOLECULAR BASIS OF DISEASE
Titolo : NADPH oxidase-dependent redox signaling in human heart failure: Relationship between the left and right ventricle
Autore/i : NEDIANI C and BORCHI E and GIORDANO C and BARUZZO S and PONZIANI V and SEBASTIANI M and NASSI P and MUGELLI A and D'AMATI G. and CERBAI E
Anno : 2007
Numero volume : 42,
Pagine da - a : 826--834
Issn : 0022-2828
Doi : 10.1016/j.yjmcc.2007.01.009
Nome rivista o titolo libro o atti conferenza : JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY
Titolo : Induction of mitochondrial biogenesis is a maladaptive mechanism in mitochondrial cardiomyopathies
Autore/i : SEBASTIANI M and GIORDANO C and NEDIANI C and TRAVAGLINI C and BORCHI E and ZANI M and FECCIA M and MANCINI M and PETROZZA V and COSSARIZZA A and GALLO P and TAYLOR RW and D'AMATI G.
Anno : 2007
Numero volume : 50,
Pagine da - a : 1362--1369
Issn : 0735-1097
Doi : 10.1016/j.jacc.2007.06.035

MACROAREA : D

PAOLA GREGORY

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Dipartimento : Architettura e Progetto

Theories of contemporary architecture

Teorie di architettura contemporanea

Considering architectural theories as a "way of project's being", the research presents an engaging and original series of meditations on issues and figures that are at the heart of the most pressing debates surrounding architecture today. Interpreting contemporary theories in light of different disciplines - art, aesthetic, philosophy, linguistic thought and sciences (from not-linear dynamics to artificial life) - the research opens up the complex and difficult relationships between these disciplines and architectural design in an era - the postmodern age - in which the utopian project of modernism and the idealism of neo-avant-garde have seemed to be fallen away. In the crisis of the traditional legitimating "myths" or "metanarratives" of the speculative unity of all knowledge, contemporary architecture tries to find new experimental territories of thought and practice, based on an augmented awareness of pluralism and complexity of cultural and social issues. In this way post-structuralism, phenomenology, aesthetic of sublime, ecology and information technology revolution offer to the architects "Elective Affinities" to think again the limits of our discipline in an interpenetration of different sights, reflections, languages.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : XXI Secolo. Vol. IV. Gli spazi e le arti
Titolo : Teorie dell'architettura
Autore/i : GREGORY PAOLA
Anno : 2010
Numero volume : IV
Pagine da - a : 241-252
Nome rivista o titolo libro o atti conferenza : RASSEGNA DI ARCHITETTURA E URBANISTICA

Nome rivista o titolo libro o atti conferenza : XXI Secolo. Vol. IV. Gli spazi e le arti
Titolo : Peter Eisenman. Dallo strutturalismo al post-strutturalismo: l'architettura come processo autoreferenziale.
Autore/i : GREGORY PAOLA
Anno : 2009
Numero volume : 127/128/129
Pagine da - a : 40-51
Issn : 0392-8608
Nome rivista o titolo libro o atti conferenza : Teorie di architettura contemporanea. Percorsi del postmodernismo.
Autore/i : GREGORY PAOLA
Anno : 2010
Pagine da - a : 1-263
Isbn : 978-88-430-5425-1

MACROAREA : D

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Dottorato di ricerca XVIII ciclo - Titolo della tesi: Margini della mobilità. Integrare, trasformare, progettare

La ricerca analizza i paesaggi infrastrutturali come luoghi delle sovrapposizioni, dissolvenze, contaminazioni e cancellazioni tra progetto di architettura e progetto di suolo. In particolare vengono prese in considerazione le aree di margine e di risulta che si sviluppano ai bordi delle infrastrutture veicolari a scorrimento veloce, contrassegnate da una doppia valenza: come luoghi caratterizzati da una problematica residualità o come territori aperti a nuove forme di progettualità. Il confronto tra modernità e contemporaneità si incentra su alcune antinomie legate ai temi della mobilità: Utopia/Disincanto, Strada della Velocità/Metafora della strada, Ordine/Caos, Velocità/Lentezza, Pubblicità/Cinema. Le trasformazioni e le relazioni che si sono venute a creare affondano le radici in differenti metodiche, analisi e verifiche. Alcuni parametri di indagine utilizzano la conoscenza percettiva dei corpi in movimento. Infrastruttura/Velocità, Spazio vuoto/Lentezza sono alcune dicotomie con le quali descrivere non soltanto la strada che attraversa, ma anche lo spazio attraversato, il vuoto, lo spazio residuale, lo spazio dismesso. L'obiettivo della ricerca riguarda l'individuazione di metodiche e approcci che restituiscano una valenza progettuale anche ai luoghi delle infrastrutture.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Margini della mobilità
Autore/i : Giovanna Donini
Anno : 2008
Pagine da - a : da 1 a 167
Isbn : 978-88-8353-598-7
Nome rivista o titolo libro o atti conferenza : L'architettura degli allestimenti/The Architecture of Installations
Titolo : Space moving
Autore/i : Giovanna Donini
Anno : 2010
Pagine da - a : da 110 a 113
Isbn : 978-88-6514-009-3
Nome rivista o titolo libro o atti conferenza : Il Mostro di San Lorenzo. Progetti per la Tangenziale Est di Roma
Titolo : Modificazioni infrastrutturali
Autore/i : Giovanna Donini
Anno : 2008

Nome rivista o titolo libro o atti conferenza : Margini della mobilità
Pagine da - a : da 70 a 81
Isbn : 978-88492-1384-3

MACROAREA : D

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Focal points of organizational and spatial increasing for the integration among healthcare, research and didactic activities in University Hospital: functional,
technological and project models.

I FULCRI DI SVILUPPO ORGANIZZATIVI E SPAZIALI DELL'INTEGRAZIONE TRA ASSISTENZA, RICERCA E DIDATTICA NEI POLICLINICI UNIVERSITARI:
MODELLI FUNZIONALI, TECNOLOGICI E PROGETTUALI

In the panorama of health and socio-health structures, the university hospital represents, at an international level, a particularly interesting theme, since, apart from its functional, technological and management complexity, typical of hospitals in general, it presents a further level of complexity as a result of the presence of healthcare, research and teaching on a single site.
In particular, within the greater university hospital system three functional areas were identified as significant and that had to be considered as focal points in the organisational and spatial development of the integration between healthcare, research and teaching:
1)the welcome system, by which we mean two related but independent subsystems:
-information/health admission/welcome;
-information/orientation/university welcome;
2)the surgical block, an emblematic focal point of integration between healthcare, research and teaching;
3)the wards, to be considered in organisational-functional terms, both in relation to their healthcare activities as well as in relation to their departmental aggregation.
The final aim consists in the formulation of guidelines related to the organization spatial and technological requirements of "focal points".

Altri partecipanti alla ricerca

CRISTINA BENEDETTI		SSD : ICAR/12 - Tecnologia dell'architettura
ALESSANDRO LAMANNA		SSD : MED/42 - Igiene generale e applicata
NICOLETTA MUZIO	Under 40	SSD : ICAR/12 - Tecnologia dell'architettura
FLAVIANO PARISE	Under 40	SSD : ICAR/12 - Tecnologia dell'architettura
SAVERIO CAMAITI	Under 40	SSD : ICAR/12 - Tecnologia dell'architettura
CAROLINA CUZZONI		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
PIETRO GRASSO		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
FLAVIO ROSA	Under 40	SSD : ING-IND/11 - Fisica tecnica ambientale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : The culture for the future of healthcare architecture. Proceedings of 28th International Public Health Seminar
Titolo : University Hospital: Innovation in Organisational Models for Integrating Healtcare, Research and Teaching
Autore/i : GIOVENALE ANNA MARIA
Anno : 2009

Nome rivista o titolo libro o atti conferenza : The culture for the future of healthcare architecture. Proceedings of 28th International Public Health Seminar
Numero volume : unico
Pagine da - a : 159-170
Isbn : ISBN 978-88-6055-421-5

MACROAREA : D

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Dipartimento : Informatica

Intuitive Appearance Design

Design Intuitivo dell'Aspetto delle Immagini Sintetiche

While Computer Graphics has matured to the point where we can synthesize images that are indistinguishable from reality, the use of synthetic imagery remains limited since modeling synthetic environments is time consuming for experts and beyond the technical skill of novices. To remove this barrier, I investigate algorithms that simplify the design of objects¿ appearance, which comes from the interaction of surface materials and scene lighting, complementing others¿ work on shape and animation.

Appearance design is cumbersome since users are solving an inverse problem in that they are trying, by repeated trial-and-error, to find light and material parameters that best approximate a desired look. I investigate algorithms that allow users to specify objects¿ looks directly and with simple interfaces, while appearance parameters are determined automatically. These algorithms are general in their support for indoor and outdoor lighting, and man-made and natural materials.

Rigorous user studies motivate and validate our approach, showing that novices can perform appearance design tasks, which was thought to be impossible, and that experts have their interaction time reduced significantly. Some of these methods are also used in film production at Pixar/Disney.

Partner della ricerca

Intel Corporation
Microsoft Research
University of Virginia
Cornell University
Dartmouth College

Brevetti

F. Pellacini, K. Vidimče, and A. Mohr. Hybrid Hardware-Accelerated Relighting System for Computer Cinematography. U.S. Patent 7.427.986, 2008.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ACM Transactions on Graphics
Titolo : EnvyLight: An Interface for Editing Natural Illumination
Autore/i : F. Pellacini
Anno : 2010
Numero volume : 29 (4)
Pagine da - a : 34:1-34:8
Issn : 0730-0301
Doi : {http://doi.acm.org/10.1145/1778765.1778771

Nome rivista o titolo libro o atti conferenza : ACM Transactions on Graphics
Nome rivista o titolo libro o atti conferenza : ACM Transactions on Graphics
Titolo : AppWand: Editing Measured Materials using Appearance-Driven Optimization
Autore/i : F. Pellacini, J. Lawrence
Anno : 2007
Numero volume : 26(3)
Pagine da - a : 54:1-54:9
Issn : 0730-0301
Doi : http://doi.acm.org/10.1145/1275808.1276444
Nome rivista o titolo libro o atti conferenza : ACM Transactions on Graphics
Titolo : AppProp: All-Pairs Appearance-Space Edit Propagation
Autore/i : X. An, F. Pellacini
Anno : 2008
Numero volume : 27(3)
Pagine da - a : 40:1-40:9
Issn : 0730-0301
Doi : http://doi.acm.org/10.1145/1360612.1360639

MACROAREA : D

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Secure Topology Maintenance Protocols for Wireless Sensor Networks

Protocolli Sicuri per il Mantenimento della Topologia nelle Reti di Sensori Wireless

This work addresses the security of Topology Maintenance Protocols (TMPs) in mobile ad-hoc networks. TMPs are key for operating the Wireless Sensor Networks (WSNs). Their adoption serves several goals, such as: save nodes energy, avoid collisions in communications, and have an adequate number of nodes monitoring the environment by alternating duty cycles with sleep cycles on the sensor nodes. We analyze the security vulnerabilities of well-known TMPs. We propose a meta-protocol to represent the classes of TMPs. Furthermore, we discover various types of malicious behavior and actions that can be carried out by an adversary to attack a WSN by exploiting the TMP that is used in the network. It resulted in the proposal of countermeasures that can be taken to increase the robustness of the TMPs and make them resilient to such attacks. Furthermore, we designed a secure TMP that does not require a pairwise node confidentiality: Sec-TMP. We show that Sec-TMP performs well without any assumption neither on the show-up-time of the node performing data-collection, nor on their mobility model. In particular, we test Sec-TMP against a realistic unpredictable mobility scenario. Finally, extensive simulations support the quality of Sec-TMP in terms of effectiveness and security capability.

Altri partecipanti alla ricerca

Senjeev Setia		SSD : INF/01 - Informatica
Angelo Spognardi	Under 40	SSD : INF/01 - Informatica
Roberto Di Pietro		SSD : INF/01 - Informatica
Luigi V. Mancini		SSD : INF/01 - Informatica
Mauro Conti	Under 40	SSD : INF/01 - Informatica
Alessandro Mei		SSD : INF/01 - Informatica
Sushil Jajodia		SSD : INF/01 - Informatica

Partner della ricerca

Center for Secure Information Systems (CSIS) at the George Mason University, Fairfax, Virginia.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Dependable and Secure Computing
Titolo : Securing Topology Maintenance Protocols for Sensor Networks
Autore/i : Andrea Gabrielli, Luigi V. Mancini, Sanjeev Setia, Sushil Jajodia
Anno : 2011
Numero volume : 8(3)
Pagine da - a : 450-465
Issn : 1545-5971
Doi : http://doi.ieeecomputersociety.org/10.1109/TD
Nome rivista o titolo libro o atti conferenza : Proceedings of the 8th ACM international workshop on Mobility management and wireless access
Titolo : The Smallville Effect: Social Ties Make Mobile Networks More Secure Against the Node Capture Attack
Autore/i : Mauro Conti, Roberto Di Pietro, Andrea Gabrielli, Luigi V. Mancini, Alessandro Mei
Anno : 2010
Pagine da - a : 99--106
Isbn : 978-1-4503-0277-7
Doi : http://doi.acm.org/10.1145/1868497.1868514
Nome rivista o titolo libro o atti conferenza : Security and Privacy in Communication Networks
Titolo : Sec-TMP: a Secure Topology Maintenance Protocol for Event Delivery Enforcement in WSN
Autore/i : Andrea Gabrielli, Mauro Conti, Roberto Di Pietro, Luigi V. Mancini
Anno : 2009
Numero volume : 19
Pagine da - a : 265-284
Isbn : 978-3-642-05284-2
Doi : dx.doi.org/10.1007/978-3-642-05284-2_15

MACROAREA : D

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Soccer Robot Players

Robot calciatori

RoboCup started a series of scientific competitions by focusing on robotic soccer games (football for Europeans) in 1997 and since then it became a reference for experimental research in Artificial Intelligence and Robotics. The scientific challenge of the competitions is to build a team of robots that can compete with a human team in 2050. The robots have to be autonomous (not controlled by a human operator) and different design are allowed, in addition to the humanoid legged robot. The scope of RoboCup competitions has been broadening over the years addressing Search and Rescue Robotics and Service Robotics. Sapienza University of Rome participates in RoboCup Competitions since 1998, initially in the national Italian team ART team and, since 2001, with SPQR Team.
Some results:
Second place in the Mid-Size League in Stockholm (1999, Sweden).
Fourth place in Four Legged League in Melbourne (2001, Australia).

Third place in RoboCuRoboCup@Home League in Bremen (2006, Germany).
Third place in RoboCup Rescue Virtual Robots League in Atlanta (2007, USA).
Research papers, including the best paper award in RCSymp 2006, AAMAS 2008.
More than a hundred students from Sapienza have participated in the competition,
events, invitations in National TV channels.
Presidency of RoboCup 2011

Altri partecipanti alla ricerca

Luca Iocchi SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : AUTONOMOUS AGENTS AND MULTI-AGENT SYSTEMS
Titolo : Petri Net Plans
Autore/i : ZIPARO V.A and IOCCHI L and LIMA P and NARDI D. and PALAMARA P.F
Anno : 2010
Pagine da - a : 1--40
Issn : 1387-2532
Doi : 10.1007/s10458-010-9146-1
Nome rivista o titolo libro o atti conferenza : ROBOTICS AND AUTONOMOUS SYSTEMS
Titolo : Policy gradient learning for quadruped soccer robots
Autore/i : CHERUBINI A and GIANNONE F and IOCCHI L and NARDI D. and PALAMARA P.F
Anno : 2010
Numero volume : 58 (7)
Pagine da - a : 872--878
Issn : 0921-8890
Doi : 10.1016/j.robot.2010.03.008
Nome rivista o titolo libro o atti conferenza : ACM TRANSACTIONS ON COMPUTATIONAL LOGIC
Titolo : Reasoning about Actions with Sensing under Qualitative and Probabilistic Uncertainty
Autore/i : IOCCHI L and LUKASIEWICZ T and NARDI D. and ROSATI R
Anno : 2009
Numero volume : 10(1)
Pagine da - a : 1--41
Issn : 1529-3785

MACROAREA : D

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Dipartimento : Informatica e sistemistica "Antonio Ruberti"

Real time scheduling of tasks in embedded systems: new algorithms and new analysis techniques

Problemi di sequenziamento in tempo reale di lavori in sistemi embedded: nuovi algoritmi e nuove tecniche di analisi

As embedded microprocessors become more and more common, we need to design systems that are guaranteed to meet deadlines in applications for safety critical systems (e.g. cars, planes), where missing a deadline might have severe consequences. In such real-time systems, several tasks must be executed on a multiprocessor platform and a scheduling policy needs to decide which tasks should be active in which intervals, so as to guarantee that all deadlines are met. The research introduces new techniques solving important problems with both theoretical and practical impact. We obtained results for most common and studied models: sporadic task, periodic task and for a new emerging model, mixed-criticality. For sporadic task model we introduced new tools based on game theory and we solve a long standing open problem (30 years!) characterizing the complexity of the general problem for multiprocessor platforms.
For periodic task model we fully characterize the complexity of the problem using techniques from on-line algorithms and resource augmentation. Many safety-critical embedded systems are required to meet multiple sets of certification requirements, from different certification authorities. We started the study of such mixed-criticality systems, whose solution needs new techniques.

Altri partecipanti alla ricerca

Vincenzo Bonifaci Under 40 SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Computer, accettato per la pubblicazione
Titolo : Scheduling real-time mixed-criticality jobs
Autore/i : Sanjoy Baruah, Vincenzo Bonifaci, Gianlorenzo D¿Angelo, Haohan Li,
Alberto Marchetti-Spaccamela, Nicole Megow, Leen Stougie
Anno : 2011

Nome rivista o titolo libro o atti conferenza : Algorithmica, pubblicato on-line nel febbraio 2011, in corso di stampa, Best paper award (su 245 lavori sottomessi) a European Symposium on Algorithms, Liverpool, 2010.
Titolo : Feasibility Analysis of Sporadic Real-Time Multiprocessor Task Systems
Autore/i : V.Bonifaci, A.Marchetti Spaccamela
Anno : 2011
Doi : 10.1007/s00453-011-9505-06

Nome rivista o titolo libro o atti conferenza : ACM-SIAM Symposium on Discrete Agorithms, la versione finale e' in corso di stampa su ACM Transactions on Algorithms
Titolo : Algorithms and Complexity for Periodic Real-Time Scheduling
Autore/i : Vincenzo Bonifaci, Ho-Leung Chan, Alberto Marchetti-Spaccamela, Nicole Megow
Anno : 2010
Pagine da - a : 1350-1359

MACROAREA : D

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Dipartimento : Informatica e sistemistica "Antonio Ruberti"

Algorithmic Mechanism Design and its applications to Network Economics

Progetto Algoritmico di Meccanismi e la sua applicazione all'Economia delle Reti

Many economic activities (markets, auctions) are nowadays managed on the Internet from computerized algorithms. Algorithmic mechanism design provides a conceptual framework for designing algorithms that are able to regulate economic interactions in networks while assuming strategic selfish behavior from partecipants that can report false input data. We design mechanisms for sharing the cost of a network between agents. Declaring the truth input data is a profit maximizing strategy even for players that collude. Our mechanism gives a Steiner forest with best possible approximation of the optimum cost. Network algorithms are often required to optimize on multiple objectives, as for instance cost of cables and delay. We design truthful algorithmic mechanisms for a wide class of multi-objective hard optimization problems in networks that approximate very closely the optimal solution. We finally design new auction mechanisms that apply to selling web ads (that generate most of the profits of search engines) to budget limited agents with different preferences on search keywords. The famous Vickrey-Clarke-Groves auction cannot be applied since the computed payments can exceed the budgets. We instead design an ascending auction that gives efficient Pareto-optimal allocations.

Partner della ricerca

University of Waterloo, Dept of Mathematics, Prof. Jochen Koenemann, post-doc at Sapienza DIS in2003 - 2004.
CWI Amsterdam and Vrije Universitet of Amsterdam, Prof. Guido Schaefer, post doc at Sapienza DIS in 2004 - 2005
Tel-Aviv University, Department of Computer Science, Prof. Amos Fiat
University of Liverpool, Department of computer Science, Prof. Piotr Krysta
University of Warsaw, Department of Informatic, Prof. Piotr Sankowski, ERC starting grant award, post-doc at DIS Sapienza in 2006 - 2010.
Università di Tor Vergata, Dipartimento di Automatica, Sistemi e Produzione, Dr. Fabrizio Grandoni, ERC starting grant award

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proceedings of the 12th ACM Conference on Electronic Commerce
Titolo : Single valued combinatorial auctions with budgets.
Autore/i : Amos Fiat, Stefano Leonardi, Jared Saia, Piotr Sankowski
Anno : 2011, Pagine da - a : 223 – 232, Isbn : ISBN 978-1-4503-0261-6
Nome rivista o titolo libro o atti conferenza : Proceedings of the Twenty-First Annual ACM-SIAM Symposium on Discrete Algorithms
Titolo : Utilitarian Mechanism Design for Multi-Objective Optimization
Autore/i : Fabrizio Grandoni, Piotr Krysta, Stefano Leonardi, Carmine Ventre
Anno : 2010, Pagine da - a : 573 – 584, Isbn : 978-0-898716-98-6
Nome rivista o titolo libro o atti conferenza : SIAM Journal on Computing
Titolo : A Group-Strategyproof Cost Sharing Mechanism for the Steiner Forest Game
Autore/i : Jochen Könemann, Stefano Leonardi, Guido Schäfer, Stefan H. M. van Zwam
Anno : 2008, Numero volume : 37(5), Pagine da - a : 1319-1341, Doi : 10.1137/050646408

MACROAREA : D

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Analysis, verification, and synthesis of semantic artifact based dynamic information systems

Analisi, verifica e sintesi di sistemi informativi basati su artefatti semantici dinamici

Semantic artifacts are entities characterized by data of interest in a given business application, and a lifecycle, which constrains the artifact¿s possible evolutions. Semantic artifacts represent data independently on how they are logically and physically stored in the actual data sources, by making use of ontologies suitably tailored for efficient access to remote data storage. Artifacts lifecycles are sophisticated, possibly non-terminating, processes, whose actions, tasks, or services invocation, results in state changes in the artifacts. Such a setting promises to be a notable advancement in business process and dynamic information systems modeling. Our research concerns the automatic analysis, verification and synthesis of semantic artifact systems using a formal approach based on temporal/dynamic logics originally proposed for software and hardware verification. The challenge though is that semantic artifacts are infinite-state, due to the presence of evolving information. However, based on the idea of bounding how much information is accumulated over time, we are devising novel techniques to reduce the problem to special forms of finite-state model checking, for which notable advancements and efficient algorithms and tools are available.

Altri partecipanti alla ricerca

Domenico Lembo	Under 40	SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni
Maurizio Lenzerini		SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni
Riccardo Rosati		SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni
Massimo Mecella	Under 40	SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni

Patner della ricerca

Prof. Alessio Lomuscio, Imperial College London, London, UK
Prof. Rick Hull, IBM T.J. Watson Research Center, NY, USA
Prof. Moshe Y. Vardi, Rice University, Huston, USA
Prof. Hector Levesque, University of Toronto, Toronto, Canada
Prof. Yves Lesperance, York University, Toronto, Canada
Prof. Diego Calvanese, Libera Univesita' di Bolzano, Bolzano, Italia
Prof. Adrian Pearce, University of Melbourne, Melbourne, Australia
Prof. Alin Deutsch, University of California San Diego, USA
Prof. Hector Geffner, Universitat Pompeu Fabra,Barcelona, Spain

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proc. of the 9th International Conference on Business Process Management (BPM'11)
Titolo : Foundations of Relational Artifacts Verification
Autore/i : Babak Bagheri Hariri, Diego Calvanese, Giuseppe De Giacomo, Riccardo De Masellis, Paolo Felli
Anno : 2011
Nome rivista o titolo libro o atti conferenza : Multi-Agent Programming: Languages, Tools and Applications
Titolo : IndiGolog: A High-Level Programming Language for Embedded Reasoning Agents
Autore/i : Giuseppe De Giacomo, Yves Lesperance, Hector Levesque, Sebastian Sardina
Anno : 2009

Nome rivista o titolo libro o atti conferenza : Proc. of the 9th International Conference on Business Process Management (BPM'11)
Isbn : 978-0-387-89298-6
Nome rivista o titolo libro o atti conferenza : Proc. the 7th International Conference on Service Oriented Computing (ICSOC'09)?
Titolo : Artifact-Centric Workflow Dominance
Autore/i : Diego Calvanese, Giuseppe De Giacomo, Rick Hull, and Jianwen Su
Anno : 2009
Pagine da - a : 130-143
Doi : 10.1007/978-3-642-10383-4_9

MACROAREA : D

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peer-to-peer collaborative massive event processing for cyberattack protection

Processamento di grandi moli di eventi a supporto di ambienti collaborativi per scoperta di attacchi informatici di tipo "peer-to-peer"

With the joint advent of web 2.0, the ultra broadband and of the (private/public) cloud computing technologies, a new era is opening concerning the opportunity of sharing, processing and correlating a huge amount of information in a timely manner on the top of the Internet. Leveraging from the peer-topeer research results, it becomes indeed possible to customize virtual environments where group of partners (peers) share and correlate information that can be used in many different applicative domains, e.g., security - to increase the partner¿s security level from hackers attacks by raising situation awareness of each partners; failure mitigation – to forecast failures in a complex distributed software systems etc. The research aims to: 1. establishing contractually regulated collaborative environments for Internet-scale service delivery that can be created in a structured and controlled manner, where participants can belong to different organizational and geographical domains. 2.. designing a cheap-to-own distributed event driven computing environment (including complex event pattern detection and event dissemination layers) to be embedded in the collaborative environment whose aim is to correlate events and to detect event of interests (e.g threads in the security scenario).

Altri partecipanti alla ricerca

Leonardo Querzoni	Under 40	SSD : ING-INF/05 - Sistemi di elaborazione delle informazioni

Partner della ricerca

MICROSOFT è partner nella realizzazione di unsistema di "Smart Mobility" per grandi città basatosull'invio di eventi da diverse sorgenti (inclusioperatori di settore e semplici cittadini) atte a dareuna fotografia real-time della viabilità.
IBM e' partner della ricerca nella parte sicurezza deisistemi finanziari. Stiamo realizzando con loro unnuovo tipo di middleware chiamato AGILIS per ildispiegamento delle componenti atte a realizzarel'event processing nell'ambiente collaborativo.

Brevetti

(WO/2010/075868) METHOD AND SYSTEM FOR DATA MANAGEMENT IN PEER-TO- PEER NETWORK. Inventors: MARCHISIO, Marco, Enzo; (IT), PAZZINI, Ivan; (IT). RUFFINO, Simone; (IT), BALDONI, Roberto; (IT). MILANI, Alessia; (IT). QUERZONI, Leonardo; (IT)
(WO/2010/075868) METHOD AND SYSTEM FOR DATA MANAGEMENT IN PEER-TO- PEER NETWORK. Inventors: MARCHISIO, Marco, Enzo; (IT), PAZZINI, Ivan; (IT). RUFFINO, Simone; (IT), BALDONI, Roberto; (IT). MILANI, Alessia;

(WO/2010/075868) METHOD AND SYSTEM FOR DATA MANAGEMENT IN PEER-TO- PEER NETWORK. Inventors: MARCHISIO, Marco, Enzo; (IT), PAZZINI, Ivan; (IT). RUFFINO, Simone; (IT), BALDONI, Roberto; (IT). MILANI, Alessia; (IT). QUERZONI, Leonardo; (IT)
(IT). QUERZONI, Leonardo; (IT).

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : J. Parallel Distrib. Comput.
Titolo : Dynamic quorums for DHT-based enterprise infrastructures.
Autore/i : Roberto Baldoni, Ricardo Jiménez-Peris, Marta Patiño-Martínez, Leonardo Querzoni, Antonino Virgillito
Anno : 2008
Numero volume : 68
Pagine da - a : 1235-1249
Doi : 10.1016/j.jpdc.2008.04.006
Nome rivista o titolo libro o atti conferenza : IEEE Trans. Parallel Distrib. Syst.
Titolo : Coupling-Based Internal Clock Synchronization for Large-Scale Dynamic Distributed Systems.
Autore/i : Roberto Baldoni, Angelo Corsaro, Leonardo Querzoni, Sirio Scipioni, Sara Tucci Piergiovanni
Anno : 2010
Numero volume : 21
Pagine da - a : 607-619
Issn : 1045-9219
Doi : http://doi.ieeecomputersociety.org/10.1109/TP
Nome rivista o titolo libro o atti conferenza : Collaborative Financial Infrastructure Protection: Tools, Abstractions, and Middleware
Titolo : Libro
Autore/i : Roberto Baldoni, Gregory Chockler
Anno : 2012
Pagine da - a : 1-250
Issn : to appear

MACROAREA : D

Maria Sabrina Sarto

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Dipartimento : Ingegneria astronautica, elettrica ed energetica

Carbon-based nanomaterials for electromagnetic compatibility applications

Nanomateriali a base carbonio per applicazioni di compatibilità elettromagnetica

Carbon-based nanomaterials, like carbon nanotubes, nanofibers or graphite nanoplatelets have been widely investigated for development of innovative multifunctional devices. The research activity has been focused on the design, modeling and realization of innovative carbon-based nanomaterials for two main field of applications: next-generation nano-interconnects, and lightweight wideband radar absorbing screens. The two research lines have been developed within EU-financed projects, and research project supported by industries (Alenia Aeronautica and Selex SI). The research team, lead by Prof. Sarto, is composed by researchers and PhD students of CNIS.
Nano-vias have been designed and realized using multiwall carbon nanotubes, grown inside porous alumina membrane without the use of catalyst. Proof-of-concept test-devices have been fabricated and tested, thanks to the collaboration with international reasearch groups.
Single-filler and multifiller nanocomposites including carbon nanotubes, nanofibers and nanoplatelets with tailored EM properties have been developed for the realization of thin absorbing panels at RF. The experimental activity was carried

out in the EMC Lab of DIAEE and in the Sapienza Nanotechnology and Nanoscience Lab.

Altri partecipanti alla ricerca

Alessio Tamburrano	Under 40	SSD : ING-IND/31 - Elettrotecnica
Sandra Greco	Under 40	SSD : ING-IND/31 - Elettrotecnica
Marcello D'Amore		SSD : ING-IND/31 - Elettrotecnica
Giovanni De Bellis	Under 40	SSD : ING-IND/31 - Elettrotecnica
Alessandro D'Aloia	Under 40	SSD : ING-IND/31 - Elettrotecnica

Partner della ricerca

Smoltek AB (Sweeden)
Università degli Studi di Salerno (Italy)
Universite Paul Sabatier Toulouse III (France)
National Institute for Research and Development inMicrotechnologies, Microphysical CharacterisationAnd Simulation Group
Alenia Aeronautica
Selex SI
Latvijas Universitates Cietvielu Fizikas Instituts(Latvia)
Philips Electronics Netherland B.V. (The Netherland)

Brevetti

Schermo di campi elettromagnetici a radio
frequenza, radar assorbente, trasparente nel visibile
Schermi elettromagnetici trasparenti per il risparmio energetico / THIN FILMS FOR ENERGY EFFICIENT TRANSPARENT ELECTROMAGNETIC SHIELDS

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Composites Science and Technology
Titolo : Effect of short carbon fibers and MWCNTs on microwave absorbing properties of polyester composites containing nickel-coated carbon fibers
Autore/i : I.M. De Rosa, A. Dinescu, F. Sarasini, M.S. Sarto, A. Tamburrano,
Anno : 2010
Numero volume : 70
Pagine da - a : 102-109
Doi : 10.1016/j.compscitech.2009.09.011
Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON NANOTECHNOLOGY
Titolo : Single-Conductor Transmission-Line Model of
Multiwall Carbon Nanotubes
Autore/i : SARTO M. and TAMBURRANO A
Anno : 2010
Numero volume : 9
Pagine da - a : 82--92
Issn : 1536-125X
Doi : 10.1109/TNANO.2009.2023516
Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON NANOTECHNOLOGY
Titolo : New Electron-Waveguide-Based Modeling for
Carbon Nanotube Interconnects

Nome rivista o titolo libro o atti conferenza : Composites Science and Technology
Autore/i : SARTO M. and TAMBURRANO A and D'AMORE M
Anno : 2009
Numero volume : 8
Pagine da - a : 214--225
Issn : 1536-125X
Doi : 10.1109/TNANO.2008.2010253

MACROAREA : D

claudio bruzzese

Under 40
SSD : ING-IND/32 - Convertitori, macchine e azionamenti elettrici
Email : claudio.bruzzese@uniroma1.it
Dipartimento : Ingegneria astronautica, elettrica ed energetica

Development of a tele-monitoring system of on-board electric motors/generators for early diagnosis of malfunctions and faults, particularly related to rotor eccentricities and bearing wear

Sviluppo di un sistema di telemonitoraggio dei generatori/motori elettrici a bordo di unità navali per la diagnostica precoce di malfunzionamenti ed avarie, con particolare riferimento alle eccentricità dei rotori ed all'usura dei cuscinetti

The research goal is the development of new diagnostic methods for application in a tele-monitoring system of on-board electric motors/generators, particularly for early diagnosis of rotor faults (shaft misalignement, bearing wear, broken bars). Usual methods for fault detection are based on vibration and temperature monitoring, routinely scheduled off-line during plant down-times. The new methods are based on machine current/voltage signature analysis, for fast on-line monitoring and early fault detection. They permit prediction of fault trends and condition-based maintenance (CBM). Fault models have been carried out by applying the Multi-Phase Symmetrical Component Theory (MPSCT) to the unsymmetrical (faulty) machine, so obtaining new fault indicators for both rotor eccentricities and broken bars. The new fault indicators are based on the simple measurement of machine currents and voltages, so they are non-invasive, affordable, and fast at the same time. Their practical application has been codified in special diagnostic procedures successfully patented from the University of Rome Sapienza. The new patented methods can be also applied to large generators in electric power plants. Major industrial firms have been involved to apply the patents.

Altri partecipanti alla ricerca

ezio santini SSD : ING-IND/32 - Convertitori, macchine e azionamenti elettrici

Partner della ricerca

Stato Maggiore della Marina - MARISTAT - Reparto Studi Progetti Mezzi Materiali - SPMM
Direzione Generale degli Armamenti Navali - NAVARM

Brevetti

Metodo per il rilevamento e la valutazione della rottura di barre rotoriche nei motori ad induzione trifase con rotore a gabbia basato su indicatori ricavati dalla misura delle sidebands delle correnti di fase - RM2006A000534
METODO PER LA VALUTAZIONE ON-LINE DEL GUASTO PER ECCENTRICITA' ROTORICA IN GENERATORI/MOTORI SINCRONI TRAMITE LA MISURA DELLE CORRENTI INTERNE DELL'AVVOLGIMENTO STATORICO - RM2011A000440
METODO PER LA MISURA DELLA RIDUZIONE DI TRAFERRO IN MACCHINE SINCRONE TRIFASI TRAMITE TRACCIAMENTO DELLE AMPIEZZE MASSIME E MINIME DI TRAIETTORIE DI VETTORI SPAZIALI MULTIPOLARI RICAVATI DALLE CORRENTI INTERNE STATORICHE. RM2011A000441

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS

Titolo : Harmonic signatures of static eccentricities in the stator voltages and in the rotor current of no-load salient pole synchronous generators

Autore/i : C. Bruzzese, G. Joksimovic

Anno : 2011

Numero volume : 58

Pagine da - a : 1606-1624

Issn : 0278-0046

Doi : 10.1109/TIE.2010.2087296

Nome rivista o titolo libro o atti conferenza : Proc. of the IEEE Electric Ship Technologies Symposium, ESTS'09. Baltimore, Maryland, April 20-22, 2009

Titolo : Ship brushless-generator shaft misalignement simulation by using a complete mesh-model for machine voltage signature analysis (MVSA)

Autore/i : BRUZZESE C., A. ROSSI, E. SANTINI, V. BENUCCI, A. MILLERANI

Anno : 2009

Numero volume : 1

Pagine da - a : 113-118

Isbn : 9781424434398

Doi : 10.1109/ESTS.2009.4906502

Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS

Titolo : Analysis and application of particular current signatures (symptoms) for cage monitoring in non-sinusoidally fed motors with high rejection to drive load, inertia, and frequency variations

Autore/i : C. Bruzzese

Anno : 2008

Numero volume : 55

Pagine da - a : 4137-4155

Issn : 0278-0046

Doi : 10.1109/TIE.2008.2004669

MACROAREA : D

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Dipartimento : Ingegneria chimica, materiali, ambiente

Innovative techniques based on hyperspectral imaging for plastic recycling

Tecniche innovative basate su "hyperspectral imaging" per il riciclo delle plastiche

In this research new inspection strategies, based on hyperspectral imaging (HSI) in the VIS-NIR and NIR wavelength ranges (400-1000 and 1000-1700 nm, respectively), have been investigated and set up to define quality control logics applied at industrial plant level for polyolefins (PO) recycling. Among polymers, PO are very popular for their low cost and wide range of applications but until now very problematic to be recycled. The research has been financed in the framework of the European FP7 Project W2Plastics "Magnetic Sorting and Ultrasound Sensor Technologies for Production of High Purity Secondary Polyolefins from Waste". Main aim of the project is the separation of pure polyethylene (PE) and polypropylene (PP) adopting an innovative process, the magnetic density separation (MDS). Results demonstrated that HSI can be used as a tool for quality control of the MDS-based recycling process for both the feed (identification of contaminants in the plastic waste) and the two different PE and PP products (control of their purity).

The installation of the sensing device, based on the developed integrated HSI hardware and software architecture, in a real recycling pilot plant, is currently in progress in Holland at Delft University of Technology premises.

Altri partecipanti alla ricerca

Giuseppe Bonifazi SSD : ING-IND/29 - Ingegneria delle materie prime

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Waste Managment
Titolo : Characterization of post-consumer polyolefin wastes by hyperspectral imaging for quality control in recycling processes
Autore/i : Silvia Serranti, Aldo Gargiulo, Giuseppe Bonifazi
Anno : 2011, Numero volume : in press, Pagine da - a : 1-12
Doi : 10.1016/j.wasman.2011.06.007
Nome rivista o titolo libro o atti conferenza : THE OPEN WASTE MANAGEMENT JOURNAL
Titolo : Post-consumer polyolefins (PP-PE) recognition by combined spectroscopic sensing techniques
Autore/i : SERRANTI S. and BONIFAZI G.
Anno : 2010, Numero volume : 3, Pagine da - a : 36-46
Issn : 1876-4002
Nome rivista o titolo libro o atti conferenza : METALURGIA INTERNATIONAL
Titolo : Innovative sensing technologies applied to post-consumer polyolefins recovery
Autore/i : BONIFAZI G., DAMIANI L., SERRANTI S., BAKKER E.J. and REM P.C.
Anno : 2009, Numero volume : XIV , Pagine da - a : 5-10
Issn : 1582-2214

MACROAREA : D

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Laminar convective heat and mass transport in electrokinetic microchannels flows.

Trasporto convettivo laminare di materia ed energia in flussi microfluidici elettrocinetici.

Convection-dominated heat and mass transport in laminar flow channels is characterized by a rich scaling behavior depending on the interaction between transverse diffusion and axial flow near the boundary point of the cross section where the velocity decays faster to zero as a function of the local transverse coordinates. This determines the main difference between the properties of the dispersion boundary layers and the boundary layers in heat/mass transfer in the classical Leveque problem associated with the local velocity structure near the solid walls. While the Leveque boundary layer is controlled by the generic in a measure-theoretical meaning properties of the velocity field near the solid stagnation boundaries, the dispersion boundary layer captures the singularities in the geometry of the cross section, with which different scaling laws for the moment hierarchy are associated. Microfluidics represent the primary field of application of the theory of convection dominated dispersion. The theory can be extended to a broad physical phenomenology including the coupling between hydrodynamics and the action of external fields modulating solute particle motion, as in flow-field fractionation, and electrokinetic devices.

Altri partecipanti alla ricerca

Augusta Pedacchia Under 40 SSD : ING-IND/26 - Teoria dello sviluppo dei processi chimici

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Physics of Fluids

Titolo : Laminar dispersion at high Péclet numbers in finite-length channels: Effects of the near-wall velocity profile and connection with the generalized Leveque problem

Autore/i : Giona, M.; Adrover, A.; Cerbelli, S.; Garofalo, F.

Anno : 2009

Numero volume : 21

Pagine da - a : 123601-123601-20

Nome rivista o titolo libro o atti conferenza : PHYSICS OF FLUIDS

Titolo : Convection-dominated dispersion in channels with fractal cross-section

Autore/i : ADROVER A

Anno : 2011

Pagine da - a : 013603

Issn : 1070-6631

Doi : 10.1063/1.3526759

Nome rivista o titolo libro o atti conferenza : EUROPHYSICS LETTERS

Titolo : Laminar convective heat transfer across fractal boundaries

Autore/i : ADROVER A.

Anno : 2010

Issn : 0295-5075

Doi : 10.1209/0295-5075/90/14002

MACROAREA : D

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Dipartimento : Ingegneria civile, edile ed ambientale

Soil Sealing and Land Take

Impermeabilizzazione e consumo di suolo

The research was aimed at estimating diachronically land consumption due to soil sealing in suburban areas in Italy using cartographical and statistical data. The procedure was applied for the period 1949-2008 to the metropolitan area of Rome and, separately, to the whole Italian territory. The main urban areas in Italy were analyzed in the last twenty years (1990-2008). Indicators include sealed soil [ha and %]; annual land take [%]; and land use intensity or net density [ab/ha]. Land consumption shows a net trend at national level, where soil sealing increased from 2,4% in 1956 to 6,3% in 2006. Results indicate that semi-compact cities evolve towards a dispersed urban form due to the diffusion of low-density settlements located progressively further away from the inner city.

Altri partecipanti alla ricerca

Giovanna Martellato	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Luca Salvati	Under 40	SSD : SECS-S/03 - Statistica economica

Partner della ricerca

Istat

ISPRA

CRA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Ad Hoc Urban Sprawl in the Mediterranean City: Dispersing a Compact Tradition?

Titolo : Urban Sprawl in Rome: Compact vs. Dispersed Entropy in Land Uses

Autore/i : Michele Munafò

Anno : 2010

Pagine da - a : 131-149

Isbn : 978-88-613-4572-0

Nome rivista o titolo libro o atti conferenza : Scottish Geographical Journal

Titolo : Soil Sealing in the Growing City: A Survey in Rome, Italy

Autore/i : M. Munafò, C. Norero, A. Sabbi, L. Salvati

Anno : 2010

Numero volume : 126(3)

Pagine da - a : 153-161

Issn : 1470-2541

Doi : 10.1080/14702541.2010.527855

Nome rivista o titolo libro o atti conferenza : Rivista di Statistica Ufficiale

Titolo : Proposta per una metodologia di stima dell'impermeabilizzazione del suolo in Italia

Autore/i : Michele Munafò, Gianluigi Salvucci, Marco Zitti, Luca Salvati

Anno : 2011

Numero volume : 2-3/2010

Pagine da - a : 59-72

Issn : 1828-1982

MACROAREA : D

Cercato Michele

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Dipartimento : Ingegneria civile, edile ed ambientale

Geophysical prospecting employing Rayleigh waves for seismic site characterization

Tecniche di prospezione geofisica che utilizzano onde superficiali di Rayleigh per la classificazione dei terreni a fini sismici

The dispersive nature of Rayleigh waves (i.e., the variation of phase velocity with frequency) can be used to infer the shear velocity structure for engineering site evaluation. Practical applications, such as soil classification according to modern seismic codes, demand reliable inverted shear-wave profiles and a rigorous assessment of the associated posterior uncertainty. A new set of inversion algorithms for the inversion of surface-wave data has been successfully developed by the author in recent years, to address some specific sources of ambiguity in surface wave interpretation. This research involved a new theoretical implementation, based on the Implicit Function Theorem, to calculate analytically the sensitivities of Rayleigh-mode dispersion curves with respect to the layer parameters, using a layer stacking procedure involving the computation of layer matrix subdeterminants of order two. This allowed the author to develop innovative numerical algorithms for surface wave inversion, employing advanced and innovative numerical tools to treat the main sources of solution nonuniqueness. The effectiveness and the versatility of the proposed algorithms were demonstrated by "blind comparison" of the inverted shear velocity profiles with borehole data.

Altri partecipanti alla ricerca

Ettore Cardarelli SSD : GEO/11 - Geofisica applicata

Partner della ricerca

Istituto Nazionale di Geofisica e Vulcanologia (INGV)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : GEOPHYSICAL PROSPECTING
Titolo : Global surface wave inversion with model constraints
Autore/i : CERCATO M.
Anno : 2011
Numero volume : 59,
Pagine da - a : 210--226
Issn : 0016-8025
Isbn : pubblicato online novembre 2010
Doi : 10.1111/j.1365-2478.2010.00922.x
Nome rivista o titolo libro o atti conferenza : GEOPHYSICAL PROSPECTING
Titolo : Addressing non-uniqueness in linearized multichannel surface wave inversion
Autore/i : CERCATO M.
Anno : 2009
Numero volume : 57,
Pagine da - a : 27--47
Issn : 0016-8025
Doi : 10.1111/j.1365-2478.2007.00719.x
Nome rivista o titolo libro o atti conferenza : GEOPHYSICAL JOURNAL INTERNATIONAL
Titolo : Computation of partial derivatives of Rayleigh-wave phase velocity using second-order subdeterminants
Autore/i : CERCATO M.
Anno : 2007
Numero volume : 170,
Pagine da - a : 217--238
Issn : 0956-540X
Doi : 10.1111/j.1365-246X.2007.03383.x

MACROAREA : D

Gabriele Malavasi

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Dipartimento : Ingegneria civile, edile ed ambientale

Wheel-rail interaction: design, safety and monitoring

Interazione ruota-rotaia: progettazione, sicurezza e monitoraggio

The research aims to study railway vehicle-track interaction which is of interest for railway infrastructure managers and railway undertakings that have the responsibility for safe operation of infrastructure components and vehicles. The Italian infrastructure manager (RFI) is funding research to: develop methodologies to understand the behaviour of railway switches; measure wheel-rail vertical loads; streamline a methodological approach to manage the degradation of the track and the related maintenance activities. The positive results obtained allow to reach the proposed objectives and they suggest to use the tested trackside wheel-rail vertical load measurement system to check vehicles by calculating indicators to be compared with predefined threshold values. The research objectives are: defining indicators and

threshold values on the basis of norms for the acceptance of running characteristics of railway vehicles and for their loading; processing data. The European Commission is funding DICEA by the TRIOTRAIN research project aiming to reduce rolling stock acceptance costs by the use of simulations instead of experimental tests. ANSF (Italian National Safety Authority) is interested in evaluation methods of operational safety to issue the authorization to operate.

Altri partecipanti alla ricerca

Franco Maria Domenico Accattatis		SSD : ICAR/05 - Trasporti
Stefano Ricci		SSD : ICAR/05 - Trasporti
Michele Modesti		SSD : ICAR/05 - Trasporti
Riccardo Licciardello	Under 40	SSD : ICAR/05 - Trasporti
Marco Antognoli		SSD : ICAR/05 - Trasporti
Massimiliano Bruner		SSD : ICAR/05 - Trasporti
Emilio Cosciotti		SSD : ICAR/05 - Trasporti
Luca Rizzetto	Under 40	SSD : ICAR/05 - Trasporti
Alessandro Baldassarra	Under 40	SSD : ICAR/05 - Trasporti
Francesco Sorace	Under 40	SSD : ICAR/05 - Trasporti
Maria Rosaria Saporito	Under 40	SSD : ICAR/05 - Trasporti
Pietro Vitali	Under 40	SSD : ICAR/05 - Trasporti

Partner della ricerca

RFI - Rete Ferroviaria Italiana S.p.A.

ANSF - Agenzia Nazionale per la Sicurezza delle Ferrovie

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proceedings of the World Congress on Railway Research (WCRR 2011), Lille, France, May 2011

Titolo : Presentation of the EU FP7 AeroTRAIN project and first results

Autore/i : SIMA M., GRAPPEIN E., WEISE M., PARADOT N., HIEKE M., BAKER C., LICCIARDELLO R., COUTURIER M.

Anno : 2011

Nome rivista o titolo libro o atti conferenza : Atti del Convegno Sicurezza ed esercizio ferroviario, Roma, marzo 2009

Titolo : Sicurezza e progettazione strutturale dei veicoli ferroviari

Autore/i : ANTOGNOLI M., COSCIOTTI E., MALAVASI G., RIZZETTO L.

Anno : 2009

Nome rivista o titolo libro o atti conferenza : Proceedings of the World Congress on Railway Research (WCRR'08), Seoul, Korea, May 2008

Titolo : Some experience on the dynamics of turnouts due to passing trains

Autore/i : BRUNER M., CORAZZA G.R., COSCIOTTI E., LICCIARDELLO R., MALAVASI GA., MALAVASI GI., TROISI R., MUSELLA S.

Anno : 2008

MACROAREA : D

Stefania Espa
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Zonal jets in large scale circulations of oceans and planetary atmospheres

Getti zonali nella circolazione di grande scala negli oceani e nelle atmosfere dei Grandi Pianeti

A common feature observed in the atmosphere of Giant Planets (among them the Earth) is the alternation of jets elongated along the zonal direction. Recent simulations and field observations have revealed that this structure also exists in the Earth's oceans. In this research we are investigating and characterizing the main mechanisms that induce the organization of zonal flows i.e. the turbulent cascades, the baroclinic effects and the presence of the domain boundaries.

Main aim of the research are:

-to quantify the role of the different mechanism inducing flow zonation using both laboratory experiments and numerical simulations of a rotating turbulent fluid in homogeneous and thermally forced conditions;

-to investigate the role of zonal jets as barriers to meridional transport of scalar quantities as heat and chemicals tracers;

-to enhance the connections between the impact of a forcing variability on oceanic zonal jets and the possible effects on climate.

We are actually involved in an International Research Project presented by a wide team (England, Switzerland, Italy, USA, Russia, Spain, France, Israel, Scotland) focused on the analysis of zonal jets from different perspectives (climate changes, astrophysics, atmospheric physics, ocean science).

Altri partecipanti alla ricerca

Isabella Bordi		SSD : FIS/06 - Fisica per il sistema terra e per il mezzo circumterrestre
Antonio Cenedese		SSD : ICAR/01 - Idraulica
Gabriella Di Nitto	Under 40	SSD : ICAR/01 - Idraulica

Partner della ricerca

University of San Diego
University of South Florida, College of marine Sciences
CNR
Universität Hamburg

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Europhysics Letters
Titolo : The emergence of zonal jets in forced rotating shallow water turbulence: A laboratory study
Autore/i : Espa Stefania, Di Nitto Gabriella, Cenedese Antonio
Anno : 2010
Numero volume : 92
Pagine da - a : 34006 (p 1-6)
Issn : 0295-5075
Doi : 10.1209/0295-5075/92/34006
Nome rivista o titolo libro o atti conferenza : Journal of Turbulence
Titolo : Quasi-two-dimensional decaying turbulence in presence of a beta effect.
Autore/i : ESPA STEFANIA, CARNEVALE GEORGE, CENEDESE ANTONIO, MARIANI MICHELANGELO
Anno : 2008
Numero volume : 36

Nome rivista o titolo libro o atti conferenza : Europhysics Letters
Pagine da - a : 1-18
Issn : 1468-5248
Nome rivista o titolo libro o atti conferenza : Journal of Marine Research
Titolo : Quasi-two-dimensional flow on the polar beta plane: laboratory experiments
Autore/i : ESPA STEFANIA, CENEDESE ANTONIO, MARIANI MICHELANGELO, CARNEVALE GEORGE
Anno : 2009
Numero volume : 77
Pagine da - a : 502-510
Issn : 0924-7963

MACROAREA : D

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Effect of the prosthetic valve on vortex dynamics and turbulence of the left ventricular flow

Effetto delle valvole protesiche sulla dinamica della vorticità e sulla turbolenza nel flusso all'interno del ventricolo sinistro

Mechanical heart valves implanted in mitral position have a great effect on the ventricular flow. Changes include alteration of the dynamics of the vortical structures generated during the diastole and the onset of turbulence, possibly affecting the efficiency of the heart pump or causing blood cell damage. Modifications to the hemodynamics in the left ventricle, when the inflow through the mitral orifice is altered, were investigated in vitro using a silicone rubber, flexible ventricle model. Velocity fields were measured in space and time by means of 2D and 3D image analysis techniques based on the feature tracking algorithm. Three series of experiments have performed: one with a top hat inflow velocity profile ?schematically resembling physiological conditions?, and two with mechanical prosthetic valves of different design, mounted in mitral position: one monoleaflet an the other bileaflet. In each series of runs, two different cardiac outputs have been examined by changing the stroke volume. The flow was investigated in terms of phase averaged velocity field and second order moments of turbulent fluctuations. The shear strain rate and turbulence in the different test conditions have also evaluated.

Altri partecipanti alla ricerca

Stefania Espa		SSD : ICAR/01 - Idraulica
Stefania Fortini	Under 40	SSD : ICAR/01 - Idraulica
Marco Marchetti		SSD : ICAR/01 - Idraulica
Luca Shindler	Under 40	SSD : ICAR/01 - Idraulica
Giorgio Querzoli		SSD : ICAR/01 - Idraulica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : EXPERIMENTS IN FLUIDS
Titolo : A laboratory investigation of the flow in the left ventricle of a human heart with prosthetic, tilting-disk valves
Autore/i : CENEDESE ANTONIO, DEL PRETE ZACCARIA, MIOZZI MASSIMO, QUERZOLI GIORGIO
Anno : 2005
Numero volume : 39 (2)
Pagine da - a : 322-335
Issn : 0723-4864
Nome rivista o titolo libro o atti conferenza : PHYSICS OF FLUIDS

Nome rivista o titolo libro o atti conferenza : EXPERIMENTS IN FLUIDS
Titolo : Effect of the prosthetic mitral valve on vortex dynamics and turbulence of the left ventricular flow
Autore/i : QUERZOLI GIORGIO, CENEDESE ANTONIO, FORTINI STEFANIA
Anno : 2010
Numero volume : 22
Pagine da - a : 041901-1-041901-10
Issn : 1070-6631
Nome rivista o titolo libro o atti conferenza : JOURNAL OF BIOMECHANICS
Titolo : Combined experimental and numerical analysis of the flow structure into the left ventricle
Autore/i : DOMENICHINI FEDERICO, QUERZOLI GIORGIO, CENEDESE ANTONIO, PEDRIZZETTI GIANNI
Anno : 2007
Numero volume : 40
Pagine da - a : 1988-1994
Issn : 0021-9290

MACROAREA : D

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where strangers become neighbours

where strangers become neighbours

In the present age of migration the influx of immigrants leads inevitably to the spatial and social restructuring of cities and regions. It is often accompanied by fears of and hostility towards the newcomers. Nevertheless this influx of immigrants is essential to economic growth.
How can immigrants become accepted members of the society of their adopted country? How can strangers become neighbours? What alchemies of political and social imagination are required to achieve peaceful coexistence in the mongrel cities of the 21st century? What community planning interventions need to be built?
This research tackles an important contemporary issue -the social integration of immigrants in a large metropolis- by way of the detailed case study of one Canadian city, Vancouver.
The research resulted in both a book and a documentary.
The book provides a large political and legal context which makes this case study comprehensible and inspiring to readers outside Canada. The accompanying award-winning film illustrates how one neighbourhood, and one local institution has been engaged in creating a welcoming place for everyone.
The use of film-making as an action research tool and the digital ethnographic methodology provide alternative ways of understanding a complex social process

Altri partecipanti alla ricerca

Leonie Sandercock SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

School of Community and Regional Planning (UBC, Vancouver)- Prof. Leonie Sandercock

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PLANNING THEORY & PRACTICE
Titolo : Digital ethnography as planning praxis: an experiment with film as social research, community engagement and

Nome rivista o titolo libro o atti conferenza : PLANNING THEORY & PRACTICE
policy dialogue
Autore/i : Sandercock Leonie, Attili Giovanni
Anno : 2010
Issn : 1464-9357
Nome rivista o titolo libro o atti conferenza : Where strangers become neighbours. Integrating immigrants in Vancouver, Canada
Autore/i : Sandercock Leonie, Attili Giovanni
Anno : 2009
Isbn : 9781402090349
Nome rivista o titolo libro o atti conferenza : Where strangers become neighbours. Integrating immigrants in Vancouver, Canada
Titolo : "Where Strangers become Neighbours": the story of a research, the research of a story
Autore/i : Attili Giovanni
Anno : 2009
Isbn : 9781402090349

MACROAREA : D

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Design-time analysis of robustness to attacks in cryptographic integrated circuits.

Analisi di robustezza agli attacchi in circuiti integrati crittografici in fase di progetto.

The design flow of a digital cryptographic device must take into account the evaluation of its security against attacks based on side-channel observation. The adoption of high-level countermeasures and the verification of the feasibility of new attacks presently require the execution of time-consuming physical measurements on the prototype product or the simulation at a low abstraction level. Starting from these assumptions, we developed an exploration approach centered at high-level simulation in order to evaluate the actual implementation of a cryptographic algorithm, this being software or hardware based. The simulation is performed within a unified tool based on SystemC, which can model a software implementation running on a microprocessor-based architecture or a dedicated hardware implementation and mixed software-hardware implementations with cycle-accurate resolution. Here, we describe the tool and provide a large set of design explorations and characterizations based on actual implementations of the AES cryptographic algorithm, demonstrating how the execution of a large set of experiments allowed by the fast simulation engine can lead to important improvements in the knowledge and identification of the weaknesses in cryptographic algorithm implementations.

Altri partecipanti alla ricerca

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Alessandro Trifiletti		SSD : ING-INF/01 - Elettronica

Partner della ricerca

Infineon Technologies - Graz (Austria)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Secure and Dependable Computing
Titolo : High Level Side Channel Attack Modeling and Simulation for Security-Critical Systems-on-Chips

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Secure and Dependable Computing
Autore/i : Menichelli F., Menicocci R., Olivieri M., Trifiletti A.
Anno : 2008
Numero volume : 5
Issn : 1545-5971
Nome rivista o titolo libro o atti conferenza : IET Information Security
Titolo : Testing power-analysis attack susceptibility in Register Transfer Level designs
Autore/i : Bucci M., Luzzi R., Menichelli F., Menicocci R., Olivieri M., Trifiletti A.
Anno : 2007
Numero volume : 1
Issn : 1751-8709

MACROAREA : D

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Architectures and protocols for energy saving in new generation telecommunication networks

Architetture e protocolli per il risparmio energetico in reti di telecomunicazione di nuova generazione

The concept of green networking is gaining increasing popularity and interest among network providers and equipment manufacturers, fueled by recent studies indicating that the ICT sector is responsible of about the 8% of the worldwide electricity consumption and the network account is estimated about the 15% of the ICT power consumption.
This research project is focused on innovative solutions, mechanisms and architectures able to boost the network energy efficiency and to explicitly control energy saving by exploiting network-specific features.
Two main research directions are currently active:
i) definition of innovative solutions and power management mechanisms to reduce energy consumption in next generation network devices (e.g. power management mechanisms, buffering/shaping schemes, smart switching architectures, etc.);
ii) definition of protocols and algorithms for dynamic network planning, control and resource allocation in IP/MPLS and optical networks, exploiting traffic variation to reduce energy consumption; the interest is mainly focused on policies able to turn off a subset of network elements (nodes and/or links) when the network is underloaded, so that, at any instant, the amount of active resources is dynamically adapted to the actual need.

Altri partecipanti alla ricerca

Angelo Coiro	Under 40	SSD : ING-INF/03 - Telecomunicazioni
Vincenzo Eramo		SSD : ING-INF/03 - Telecomunicazioni
Antonio Cianfrani	Under 40	SSD : ING-INF/03 - Telecomunicazioni
Marco Polverini	Under 40	SSD : ING-INF/03 - Telecomunicazioni
Francecsa Cuomo		SSD : ING-INF/03 - Telecomunicazioni

Partner della ricerca

Fondazione Ugo Bordoni (FUB)
Ericsson Telecomunicazioni S.p.A.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE Journal of Selected Topics in Quantum Electronics, Special issue on "Green Photonics".

Nome rivista o titolo libro o atti conferenza : IEEE Journal of Selected Topics in Quantum Electronics, Special issue on "Green Photonics".
Titolo : Reducing Power Consumption in Wavelength Routed Networks by Selective Switch Off of Optical Links
Autore/i : Coiro A., Listanti M., Valenti A., Matera F.
Anno : 2011
Numero volume : Vol. 17, No. 2
Pagine da - a : 428 - 436
Issn : 1077-260X
Doi : 10.1109/JSTQE.2010.2052791
Nome rivista o titolo libro o atti conferenza : IEEE Network, Special Issue on "Energy-Efficient Networks".
Titolo : Enabling Backbone Networks to Sleep
Autore/i : Bolla R., Cianfrani A., Giusti R., Listanti M.
Anno : 2011
Numero volume : Vol. 25, No. 2
Pagine da - a : 26 - 31
Issn : 0890-8044
Doi : 10.1109/MNET.2011.5730525
Nome rivista o titolo libro o atti conferenza : IEEE/OSA Journal of Optical Communications and Networking, Special Issue on "Architectures and Technologies for Ultra-high capacity Switched and routed Optical networks"
Titolo : Power Consumption in Bufferless Optical Packet Switches in SOA Technology
Autore/i : Eramo V., Listanti M.
Anno : 2009
Numero volume : Vol. 1, No. 3
Pagine da - a : B15 - B29
Issn : 1943-0620
Doi : 10.1364/JOCN.1.000B15

MACROAREA : D

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Control of electromagnetic radiation through frequency selective surfaces

Controllo della radiazione elettromagnetica mediante superfici selettive in frequenza

Frequency Selective Surfaces (FSS) are planar resonant structures obtained through the combination of a number of dielectric layers with arrays of mono-dimensional or two-dimensional metallic elements or apertures on metallic screens. They are employed in many electromagnetic applications in a frequency band from UHF to optics. Periodic surfaces find use as phased arrays, artificial dielectric and metamaterials, nanostructures, diffraction gratings, reflectors for antennas and radars, dichroic surfaces, and spatial filters.

The Fourier Modal Method (FMM) has been implemented for a fast and accurate modeling of dielectric FSS for radiation of any angle of incidence, frequency and polarization. It permits to analyze arbitrary inclusions and the extension to metallic materials is straightforward.

The theory has been favourably compared with an in-house numerical code based on Finite Difference Time Domain (FDTD) for the simulation of three-dimensional structures, and with commercial codes.

The results have been tested by an experimental investigation performed in a shielded anechoic chamber on designed prototypes, using a network analyzer to measure the scattering parameters. In particular, the improving effects of such structures on the gain of printed antennas have been confirmed.

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Università di Ferrara, Dipartimento di Ingegneria

Università Roma Tre, Dipartimento di Elettronica Applicata

DTU Fotonik, Technical University of Denmark

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Microwave and Optical Technology Letters

Titolo : Unidimensional EBG cavities as superstrates of a patch antenna

Autore/i : F. Frezza, L. Pajewski, C. Ponti, G. Schettini

Anno : 2009

Numero volume : 51

Pagine da - a : 2769-2774

Issn : 0895-2477

Doi : 10.1002/mop.24737

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Nanotechnology

Titolo : Full-Wave Characterization of Three-Dimensional Photonic Band-Gap Structures

Autore/i : F. Frezza, L. Pajewski, G. Schettini

Anno : 2006

Numero volume : 5

Pagine da - a : 545-553

Issn : 1536-125X

Doi : 10.1109/TNANO.2006.880488

Nome rivista o titolo libro o atti conferenza : Electromagnetics

Titolo : Directivity enhancement of double-slot antennas by a woodpile Electromagnetic Bandgap

Autore/i : F. Frezza, L. Pajewski, C. Ponti, G. Schettini

Anno : 2010

Numero volume : 30

Pagine da - a : 69-81

Issn : 0272-6343

Doi : 10.1080/02726340903485323

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Green Radar Technology (GRT): passive radar sensors for surveillance applications without e.m. emissions

Green Radar Technology (GRT): sensori radar passivi per applicazioni di sorveglianza senza emissioni e.m.

The research aims at the development of a new passive radar (PR) sensor concept for green and environmentally sustainable surveillance applications. PR systems exploit existing transmitters as illuminators of opportunity which results in the exciting possibility of low cost surveillance, reduced EM pollution and environmental impact, and no additional demand on spectrum resources. Therefore PR attracts a wide range of civilian applications spanning from air traffic control, to vehicular traffic monitoring, and indoor surveillance. To this end the use of many different sources of opportunity has been investigated (transmitters of FM radio, DVB, FMCW OTH radar, WiMAX and WiFi routers) for both long range and local area applications. In each case, the enabling methodologies have been defined for the new PR concept there including innovative signal processing techniques and operational strategies.
The experimental activity led to the development of PR prototypes, used to assess the practical effectiveness of the green PR.
Future activity is demonstration for civil air traffic control and anti-terrorism security monitoring.
A 3 hours Tutorial Lecture was invited on this subject at IEEE Radar Conf. 2010 in Washington, as well as a chapter in new radar book.

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Defence Science and Technology Organisation (DSTO, Australia)
Electronic and Electrical Engineering Department, University College London (UK)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS
Titolo : Ambiguity Function Analysis of Wireless LAN transmissions for passive radar
Autore/i : COLONE F., WOODBRIDGE K., GUO H., MASON D., BAKER C. J.
Anno : 2011
Numero volume : 47
Pagine da - a : 240 - 264
Issn : 0018-9251
Doi : 10.1109/TAES.2011.5705673
Nome rivista o titolo libro o atti conferenza : IET RADAR, SONAR & NAVIGATION
Titolo : Adaptive beamforming for high-frequency over-the-horizon passive radar
Autore/i : FABRIZIO G.,COLONE F., LOMBARDO P., FARINA A.

Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS
Anno : 2009
Numero volume : 3
Pagine da - a : 384 - 405
Issn : 1751-8784
Doi : 10.1049/iet-rsn.2008.0159
Nome rivista o titolo libro o atti conferenza : IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS
Titolo : A multistage processing algorithm for disturbance removal and target detection in Passive Bistatic Radar
Autore/i : COLONE F., O'HAGAN D. W., LOMBARDO P., BAKER C. J.
Anno : 2009
Numero volume : 45
Pagine da - a : 698 - 721
Issn : 0018-9251
Doi : 10.1109/TAES.2009.5089551

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Power Line Communications for InHome Internet Access and Smart Grids

Sistemi di trasmissione dati su linee elettriche per accesso ad Internet e per applicazioni Smart Grid

Modern Communication Technologies share a common problem: Bandwidth and Power efficiencies. While the efficiency required for spectrum usage is different from wireless to wireline since the former has to meet some regulatory constraints and the latter is mainly tied to channel quality aspects, the power efficiency is mainly linked to electrical power that comes from different sources like gas, oil, wind, solar, water.
Unfortunately only few of these are renewable and require investments for the medium-far future. In the meantime the only one way to be run appears to be the efficient. From this the necessity, in a Green-IT vision, to propose schemes, architectures, protocols and algorithms able to optimally manage bandwidth and power so to guarantee the expected performance at a reasonable cost.
From this point of view Power Line Communications (PLC) are based on a very old medium not planned to be used for communication purposes. This justifies the challenge of this research that investigated at Physical, Access and Networking layers how to provide to the users/devices the desired quality of service without increasing costs both for Internet access (very high data rate) and Smart Metering and Managing of power grid (low data rate with very high reliability requests).

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KEMA International B.V. (Netherlands)

Devolo AG (Germany)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE International Symposium on power line Communications

Titolo : Bit-Transport Capability of Broadband Multicarrier Power Line Channels constrained by radiated Emission

Autore/i : Marcello D'Amore, Maria Sabrina Sarto, Enzo Baccarelli, Mauro Biagi

Anno : 2007

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Communications

Titolo : Power-constrained Physical-Layer Goodput Maximization for Broadband Power Line Communication links

Autore/i : Mauro Biagi, Valentina Polli, Tatiana Patriarca

Anno : 2011

Numero volume : 59

Pagine da - a : 695-700

Nome rivista o titolo libro o atti conferenza : IEEE Smartgridcomms

Titolo : Location Assisted Routing Techniques for Power Line Communications in Smart Grids

Autore/i : Mauro Biagi, Lutz Lampe

Anno : 2010

MACROAREA : D

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Wireless multiplatfOrm mimo active access netwoRks for QoS-demanding muLtimedia Delivery (WORLD)

Reti di accesso MIMO multi-piattaforma e di tipo attivo per applicazioni multimediali con requisiti di qualità

The "Wireless multiplatfOrm mimo active access netwoRks for QoS-demanding muLtimedia Delivery"(WORLD)project aims to define, design and validate the new paradigm of active user-centric self-scalable 4GWLANs. In the WORLD jargon, active means that both accessing radios and access network are both context and content-aware and, in addition, self-configuring. From a methodology point of view, the WORLD project proposes and develops an enhanced version of the cross-layer paradigm,where this last is conceived as an effective means to attain self-adapting vertical QoS-mapping. Overall, WORLD technological targets are to:

-develop, at the Physical/MAC Layer, a Multi-Antenna multimode "cognitive" architecture for the broadband access,able to learn the actual radio-ambient and self-adapt to it,so to guarantee hard bounds on both access delay and delay jitter by exploiting the emerging paradigm of queue diversity;

-design, at Network Layer,QoS multipath routing mechanisms able to optimize multiple media-depending targets by exploiting the embedded server/path diversity;

-design, at the Application/Transport Layer,cross-layer application-aware media play-out algorithms/protocols,able to self-adapt to the current connection state, while meeting the application-induced QoS constraints.

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : IEEE Trans. on Communications
Titolo : A simple recruitment scheme of multiple nodes for cooperative MAC
Autore/i : F. Verde, T. Korakis, E. Erkip, A. Scaglione
Anno : 2010
Numero volume : vol. 58, no. 9
Pagine da - a : 2667-2682
Issn : 0090-6778

Nome rivista o titolo libro o atti conferenza : Selected Areas in Communications, IEEE Journal on
Titolo : Urban Infrastructure-to-Vehicle Traffic Data Dissemination Using UEP Rateless Codes
Autore/i : Stefanovic,C.; Vukobratovic,D.; Chiti, F.; Niccolai, L.; Crnojevic,V.; Fantacci, R.;
Anno : 2011
Numero volume : vol.29,no.1
Pagine da - a : 94-102
Issn : 0733-8716

Nome rivista o titolo libro o atti conferenza : IEEE Tr.on Vehicular Technology
Titolo : Conditionally Optimal Minimum-Delay Scheduling for Bursty Traffic Over Fading Channels
Autore/i : E.Baccarelli, N.Cordeschi, M.Biagi
Anno : 2010
Numero volume : vol.59, no.7
Pagine da - a : 3294-3310
Issn : 0018-9545

MACROAREA : D

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Biowaste and algae knowledge for the production of 2nd generation biofuels

Biowaste and algae knowledge for the production of 2nd generation biofuels

GHG emissions, eutrophication and energy dependence are problems that the EU will have to face in the near future. The BioWALK4Biofuels (B4B) FP7 project aims to find a common response to these challenges by taking advantage of spontaneous biological processes: the growth of algae and the anaerobic digestion of biomass. Biowaste and carbon dioxide will be introduced into the cultivation tanks by reason of their ability to stimulate algal growth; algal biomass will keep growing and reproducing for an appropriate period of time and then be harvested, chopped and fed into the anaerobic digestion process. The main features of the project are: -The use of macroalgae as an interface between biowaste and energy production to allow a direct utilization of biowaste, obtaining at the same time positive externalities; -Macroalgae can be directly used in biodigestors to produce energy without the need for mixing with other cereal crops. Four open ponds with a total area of 5,000 m2 will be installed in a stretch of sea in the industrial port of Augusta. To support and further stimulate the production of new biomass through photosynthesis, nitrogen compounds will be introduced into an algal broth to recreate conditions of eutrophication.

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Danish Technological Institute- DENMARK
Central Salt & Marine Chemicals Research Institute - INDIA
Natural Gas Vehicle Association - SPAIN
Scandinavian Gas Treatment Service - SWEDEN
Hashemite University ¿ Faculty of Natural Resources and Environment - JORDAN
Riga Technical University - LATVIA
Aquagri Processing Pvt Ltd - INDIA
Power Ventures - ITALY
National Interuniversity Consortium for Ocean Sciences - italy

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proceedings of the 4th international congress on Energy and Environment Engineering and Management
Titolo : Using biowaste and CO2 to produce biogas from algae: the experimental plant of the B4B FP7 Project in Augusta (Sicily, Italy)
Autore/i : CAPPELLI A., SIMONI S, RENDA R, GIGLI E, MUZI L
Anno : 2011
Nome rivista o titolo libro o atti conferenza : RIGAS TEHNISKAS UNIVERSITATES ZINATNISKIE RAKSTI
Titolo : Energetic and environmental impacts related to transport and assembling processes in a biogas production plant from marine macroalgae (FP7 Project Biowalk4Biofuels)

Nome rivista o titolo libro o atti conferenza : Proceedings of the 4th international congress on Energy and Environment Engineering and Management
Autore/i : APPELLI A., GIGLI E, MUZI L, RENDA R, SIMONI S
Anno : 2010
Numero volume : 5
Pagine da - a : 16-23
Issn : 1691-5208
Nome rivista o titolo libro o atti conferenza : CONSULTING
Titolo : La produzione di Biocarburanti come risultato della depurazione delle acque reflue
Autore/i : CAPPELLI A., SIMONI S
Anno : 2007
Numero volume : 2
Pagine da - a : 11-14

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Experimental investigation on the mobility of dry granular flows of angular rock fragments

Indagine sperimentale sulla mobilità di flussi geofisici rocciosi

Geophysical granular flows such as pyroclastic flows and rock avalanches are among the most hazardous natural phenomena that kill people and damage properties worldwide. They are also too dangerous to be approached and studied directly in the field and, for this reason, laboratory experiments and numerical simulations are necessary to understand their flow mechanisms. In particular, the reciprocal of the mobility of the granular flows, i.e. the ratio among vertical to horizontal displacements of their center of mass is measured. The aim of the research is to use experimental data to derive a functional relation among flow mobility, fragment size and total mass of the granular flow that will allow predictions in natural flows. The motion of a descending flow is much more complicated than that of one single rock fragment because of the interactions and the collisions among all fragments (or clusters of fragments). Hundreds of experiments of granular flow mobility are carried out by releasing different batches of angular rock fragments down a curved chute reproducing the typical profile of a volcano. The velocities of the fragments are measured by Particle Image Velocimetry (PIV) analysis of high-speed video camera images (2000 frames/s), whereas the basal pressures are measured by a load cell. The results of the experiments clearly show that:

- the finer the grain size of the flow, the larger its mobility and this has been explained as the result of the measured fragment agitation which decreases as grain size decreases (the smaller the agitation, the smaller is also the energy dissipated by the flows per unit of travel distance);
- a large total granular mass prevents a large mobility of the flow because its frontal part reaches the less steep part of a curved chute and stops before the rear part preventing it and the center of mass to travel further downhill.

Partner della ricerca

Istituto Nazionale Geofisica e Vulcanologia - INGV

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Volcanology and Geothermal Research
Titolo : Pressures at the base of dry flows of angular rock fragments as function of grain size and flow volume: experimental results
Autore/i : B. Cagnoli, G.P. Romano
Anno : 2010

Nome rivista o titolo libro o atti conferenza : Journal of Volcanology and Geothermal Research
Numero volume : 196
Pagine da - a : 236-244
Nome rivista o titolo libro o atti conferenza : Journal of Volcanology and Geothermal Research?
Titolo : Effect of grain size on mobility of granular flows of angular rock fragments: an experimental determination
Autore/i : B. Cagnoli, G.P. Romano
Anno : 2010
Numero volume : 193
Pagine da - a : 18-24

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Direct numerical simulation of high-speed wall-bounded flows at high Reynolds number

Simulazione numerica di flussi turbolenti di parete supersonici a numeri di Reynolds elevati

The research deals with the numerical simulation of supersonic turbulent boundary layer (also in the presence of disturbing shock waves) at high Reynolds numbers by means of innovative numerical methods.
The starting point of this research was the search for a non-dissipative algorithm which can be easily incorporated in existing compressible flow solvers. We designed a numerical algorithm based on splitting of the convective terms in the Navier-Stokes equations which guarantees discrete conservation of the fluid kinetic energy in the limit of zero viscosity and weak compressibility, having arbitrary order of accuracy, and which is automatically cast in locally conservative form. Given its property of being nominally zero-dissipative, the algorithm is an excellent candidate for the direct numerical simulation of fluid turbulence.
The vastly improved computational efficiency over existing methods has allowed to perform very-large-scale numerical simulations which are the largest ever carried out in the supersonic regime, and to probe new physical phenomena that arise only at sufficiently high Reynolds number. The importance of this research is testified by the invitation to report the main results on a very prestigious journal as the Annual Review of Fluid Mechanics.

Altri partecipanti alla ricerca

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Computational Physics
Titolo : Generalized conservative approximations of split convective derivative operators
Autore/i : S. Pirozzoli
Anno : 2010
Numero volume : 229
Pagine da - a : 7180-7190
Nome rivista o titolo libro o atti conferenza : Physics of Fluids
Titolo : Inner/outer layer interactions in turbulent boundary layers: A refined measure for the large-scale amplitude modulation mechanism
Autore/i : M. Bernardini and S. Pirozzoli
Anno : 2011
Numero volume : 23

Nome rivista o titolo libro o atti conferenza : Journal of Computational Physics
Pagine da - a : 061701
Nome rivista o titolo libro o atti conferenza : Journal of Fluid Mechanics
Titolo : Direct numerical simulation of transonic shock/boundary layer interaction under conditions of incipient separation
Autore/i : S. Pirozzoli and M. Bernardini and F. Grasso
Anno : 2010
Numero volume : 657
Pagine da - a : 361-393

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Particulate transport in complex turbulent flows

Trasporto di particolato in flussi turbolenti complessi

Human scale flows are turbulent and often carry along a particulate phase. The interaction of particle inertia and turbulence
induces interesting and unexpected phenomenologies.
Aim of the project was to investigate such effects in realistic non-canonical flow conditions.
As an example, in combustion the abrupt acceleration induced by heat release leads the finite inertia particles to lag behind the fluid. As a consequence anomalous spatial arrangements are created, enhancing the particle collision rate with relevant implications for droplet coalescence and soot growth. Additionally delayed response and spatial segregation impacts the accuracy of certain optical methods (PIV) which use particles to probe the local fluid velocity in the instantaneous flame. In this context a criterion to properly select the probing particles is offered and successfully checked experimentally.
The main tool was the Direct Numerical Simulation of this complex system. The simulations allowed to identify and understand all these effects which were successively confirmed by experiments in a CH4/Air turbulent Bunsen flame endowed with tiny Alumina particles. Other realistic flows such as open jets and wall-bounded flows were also addressed showing the ubiquity of inertia/turbulence interactions.

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Experiments in Fluids
Titolo : Dynamics of PIV seeding particles in turbulent premixed flames
Autore/i : Picano F., Battista F., Troiani G. and Casciola C.
Anno : 2011

Nome rivista o titolo libro o atti conferenza : Experiments in Fluids
Numero volume : 50
Pagine da - a : 75-88
Doi : 10.1007/s00348-010-0896-y
Nome rivista o titolo libro o atti conferenza : Physics of Fluids
Titolo : Anomalous memory effects on transport of inertial particles in turbulent jets
Autore/i : Picano F., Sardina, G., Gualtieri P. and Casciola, C.
Anno : 2010
Numero volume : 22
Pagine da - a : 051705
Doi : 10.1063/1.3432439
Nome rivista o titolo libro o atti conferenza : Physics of Fluids
Titolo : Spatial development of particle-laden turbulent pipe flow
Autore/i : Picano F., Sardina G. and Casciola C.M.
Anno : 2009
Numero volume : 21
Pagine da - a : 093305
Doi : 10.1063/1.3241992

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Euler and Navier-Stokes Equations Finite Time Singularity (FTS)

Singolarita' in tempo finito nelle equazioni di Eulero e Navier-Stokes

One unsolved problem is whether the Navier-Stokes equations leads to a FTS starting from smooth i.c. A solid demonstration is honoured by the Millennium Prize of the Clay Mathematics institute. Strictly connected is the blow up of the Euler equations.
This research aims to give by DNS indications to the mathematicians to prove the FTS. The DNS uses a finite-difference scheme with good accuracy (Duponcheel et.al. 2008). For forced isotropic turbulence Orlandi (2009) showed an agreement of Kolmogorov spectra with experimental and pseudospectral data.
Orlandi & Carnevale (2007) derived by DNS a model equation having a FTS. They considered two antiparallel Lamb vortices, with energy spectrum n=-6 at t=0 and reaching n=-3 one of the requirements for FTS. The independence of FTS on the i.c. is analysed by the Taylor-Green flow.
The viscosity prevents the formation of regions with infinite velocity gradients by producing a dissipation range in the energy spectra. This is obtained by the same i.c. of the Euler equations and by varying Re. Orlandi & Pirozzoli (2010) observed at any Re the occurrence of the maximum enstrophy at the same time and the successive transition from n=-3 to n=-5/3. The sheet-like structures rolled up and tubular-like structures formed.

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : journal of fluid mechanics
Titolo : Energy spectra power laws and structures

Nome rivista o titolo libro o atti conferenza : journal of fluid mechanics
Autore/i : orlandi p.
Anno : 2009
Numero volume : Volume: 623
Pagine da - a : Pages: 353-374
Nome rivista o titolo libro o atti conferenza : JOURNAL OF COMPUTATIONAL PHYSICS
Titolo : Time-reversibility of the Euler equations as a benchmark for energy conserving schemes
Autore/i : Duponcheel M, Orlandi P, Winckelmans G
Anno : 2008
Numero volume : Volume: 227 Issue: 19
Pagine da - a : Pages: 8736-8752
Nome rivista o titolo libro o atti conferenza : PHYSICS of FLUIDS
Titolo : Nonlinear amplification of vorticity in inviscid interaction of orthogonal Lamb dipoles
Autore/i : Orlandi P, Carnevale GF
Anno : 2007
Numero volume : Volume: 19 Issue: 5
Pagine da - a : 057106

MACROAREA : D

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Coupled Analysis of Flow and Surface Ablation in Carbon-Carbon Rocket Nozzles and Hypersonic Re-entry Bodies

Analisi accoppiata del flusso e dell'ablazione sulle pareti in carbon-carbon di ugelli di endoreattori e corpi di rientro ipersonici

Ablative Thermal Protection Systems (TPS) are used to protect structural components for a variety of aerospace applications ranging from spacecraft heat shields to nozzle materials. The TPS protects the vital structure from the severe heating encountered during hypersonic flight through a planetary atmosphere or during the burning of a solid propellant. One of the most challenging aspects of TPS design is the coupling of the material response with the external flow solution which requires a high-fidelity CFD flow solver with "accurate" ablative boundary conditions. The numerical model developed considers the solution of Reynolds averaged Navier-Stokes equations in the flow, heterogeneous chemical reactions at the material surface, ablation species and pyrolysis gas injection in the boundary layer, oxidizing species diffusion in the boundary layer, and heat conduction in the material. The numerical model has been validated for graphite in Earth reentry bodies and for graphite, carbon-carbon and carbon-phenolic for solid rocket nozzles. Validation has been carried out against arc-jet data, sub-scale solid rocket motors data (BATES and Space Shuttle RSRM test motors) and full scale motor firing tests of the the second and third stage motors of the European VEGA launcher.

Altri partecipanti alla ricerca

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Marcello Onofri		SSD : ING-IND/07 - Propulsione aerospaziale

Partner della ricerca

Avio S.p.A.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF PROPULSION AND POWER

Titolo : Thermochemical Erosion Analysis for Graphite/Carbon???Carbon Rocket Nozzles

Autore/i : BIANCHI D and NASUTI F. and ONOFRI M and MARTELLI E

Anno : 2011

Numero volume : 27,

Pagine da - a : 197--205

Issn : 0748-4658

Doi : 10.2514/1.47754

Nome rivista o titolo libro o atti conferenza : JOURNAL OF SPACECRAFT AND ROCKETS

Titolo : Navier-Stokes Simulations of Hypersonic Flows with Coupled Graphite Ablation

Autore/i : BIANCHI D and NASUTI F. and MARTELLI E

Anno : 2010

Numero volume : 46,

Pagine da - a : 554--562

Issn : 0022-4650

Doi : 10.2514/1.47995

Nome rivista o titolo libro o atti conferenza : Thermochemical Erosion Analysis of Carbon-Carbon Nozzles in Solid-Propellant Rocket Motors

Autore/i : BIANCHI D and NASUTI F.

Anno : 2010

Numero volume : 15 no.8

MACROAREA : D

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Physics and Modelling of combustion in compressible regime

Fisica e Modellistica LES della combustione in regime

comprimibile

'Supersonic combustion' encompasses hypersonic flight and high Mach air-breathing engine flows such as in conventional and supersonic combustion
ramjets (SCRJ). Hypersonic air breathing engines are the challenge for new generation space launchers and trans-atmospheric vehicles (a SCRJ
for its first stage reduces orbiting costs by about an order of magnitude). Vehicles capable of such speed are being tested now in the US (HyFlight),
Russia and the UK-Australia (HyShot), in Japan, India, China and Korea. EU is funding the project (where I'm working) LAPCAT to study the feasibility of a long range hypersonic commercial transport. In a SCRJ, the air stream flow captured by the inlet is decelerated but still maintaining supersonic conditions. Since the residence time is very short (~1ms),combustion is the key issue to be investigated. This research based on the physical modeling and supported by LES has shown the important conclusion that, due to baroclinic and dilatational effects on turbulent KE decay, the flame anchoring is extremely fast. LES of the HyShot2 test case (performed by means of a Cluster consisting of 2048 cores, this allowing a simulation of '80M nodes') have shown a good prediction of experimental results(defined by Jeung at the 46th JPC the best LES in the world

Altri partecipanti alla ricerca

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Nicolas Gascoin	Under 40	SSD : ING-IND/07 - Propulsione aerospaziale
Claudio Bruno		SSD : ING-IND/07 - Propulsione aerospaziale
In-Seuch Jeung		SSD : ING-IND/05 - Impianti e sistemi aerospaziali
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Johan Steelant		SSD : ING-IND/07 - Propulsione aerospaziale

Partner della ricerca

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ENEA

PRISME institute of the University of Orleans

ESA/ESTEC

School of Mechanical and Aerospace Engineering,Seoul National University

ESA ESTEC

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : TRANSACTIONS OF THE JAPAN SOCIETY FOR?
AERONAUTICAL AND SPACE SCIENCES
Titolo : Turbulent Combustion Modelling in Supersonic
Flows for Applications to future RBCC vehicles
Autore/i : INGENITO A., BRUNO C
Anno : 2008
Numero volume : 7
Pagine da - a : 71-76
Issn : 1347-3840
Doi : 10.2322/tstj.7.Pa_71

Nome rivista o titolo libro o atti conferenza : AIAA JOURNAL
Titolo : Physics and Regimes of Supersonic Combustion
Autore/i : INGENITO A., BRUNO C
Anno : 2010
Numero volume : 48
Pagine da - a : 515-525
Issn : 0001-1452
Doi : 10.2514/1.43652

Nome rivista o titolo libro o atti conferenza : International Journal of Hydrogen Energy
Titolo : Hydrogen/air supersonic combustion for future hypersonic vehicles
Autore/i : D. Cecerea, A. Ingenito, C. Bruno, E. Giacomazzi, L. Romagnosi
Anno : 2011
Numero volume : in press
Issn : 0360-3199

MACROAREA : D

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Geodesy and geophysics of the Saturnian satellites

Geodesia e geofisica dei satelliti di Saturno

Precise radio tracking of the spacecraft Cassini has provided a determination of Titan?s mass and gravity harmonics to degree 3. The quadrupole field is consistent with a hydrostatically relaxed body shaped by tidal and rotational effects. The inferred moment of inertia factor is about 0.34, implying incomplete differentiation, either in the sense of imperfect separation of rock from ice or a core in which a large amount of water remains chemically bound in silicates. The equilibrium figure is a triaxial ellipsoid with a-c=410m and b-c=103m. The non-hydrostatic geoid height variations (up to 19m) are small compared to the observed topographic anomalies of hundreds of meters, suggesting a high degree of compensation appropriate to a body that has warm ice at depth.

This research has been funded by ASI (Italian Space Agency).

Altri partecipanti alla ricerca

Paolo Racioppa Under 40 SSD : ING-IND/05 - Impianti e sistemi aerospaziali

Partner della ricerca

California Institute of Technology - Jet Propulsion Laboratory

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Science
Titolo : Gravity Field, Shape, and Moment of Inertia of Titan
Autore/i : L.Iess, N.J. Rappaport, R.A. Jacobson, P. Racioppa, D.J. Stevenson, P. Tortora, J.W. Armstrong, S.W. Asmar
Anno : 2010, Numero volume : 327
Pagine da - a : 1367-1369
Doi : 10.1126/science.1182583
Nome rivista o titolo libro o atti conferenza : Geophysical Research Letters
Titolo : A Non-Hydrostatic Rhea
Autore/i : R. Mackenzie, L. Iess, N.Rappaport, P. Tortora
Anno : 2008, Numero volume : 35
Pagine da - a : L05204-L05207
Doi : 10.1029/2007GL032898
Nome rivista o titolo libro o atti conferenza : Science
Titolo : Titan¿s Rotation Reveals an Internal Ocean and Changing Zonal Winds
Autore/i : R.D. Lorenz, B. Stiles, R.L. Kirk, M. Allison, P. Persi del Marmo, L. Iess, J.I. Lunine, S.J. Ostro, S.Hensley
Anno : 2008, Numero volume : 319
Pagine da - a : 1649-1651
Doi : 10.1126/science.1151639

MACROAREA : D

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Inertial Particles Dynamics in Shear Turbulence

Dinamica di Particelle Inerziali in Turbolenza di Shear

Particles advected by turbulent flows spread non uniformly and, depending on the particle Stokes relaxation time, form small scale aggregates known as clusters where their local concentration is much higher than it is in nearby rarefaction regions.

The addition of a mean flow, through its large scale anisotropy, induces a preferential orientation of the clusters whose directionality can even increase in the smallest scales. In fact, particles which manifest small scale clustering have high probability to exhibit large relative velocities inherited by the large scales anisotropic fluid motions.

Both effects explain the speed-up of particle collision rate observed in turbulent flows opening new issues when the momentum exchange between the two phases becomes significant and the back-reaction of the particles on the carrier flow cannot be neglected. Small scales anisotropic clusters acts as a source/sink of momentum for the turbulent motions distributed all along the range of scale. Small scales fluid motions are prevented from recovering isotropy and eventually increment their anisotropy level due to the momentum exchange with the disperse phase.

Altri partecipanti alla ricerca

Francesco Picano	Under 40	SSD : ING-IND/06 - Fluidodinamica
Gaetano Sardina	Under 40	SSD : ING-IND/06 - Fluidodinamica
Carlo Massimo Casciola		SSD : ING-IND/06 - Fluidodinamica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHYSICA D-NONLINEAR PHENOMENA
Titolo : Statistics of particle pair relative velocity in the homogeneous shear flow
Autore/i : P. GUALTIERI; F. PICANO; G. SARDINA; C.M. CASCIOLA
Anno : 2011, Numero volume : http://dx.medra.org/10.1016/j.physd.2010.11.0
Pagine da - a : In stampa
Issn : 0167-2789
Doi : 10.1016/j.physd.2010.11.009
Nome rivista o titolo libro o atti conferenza : Journal of Fluid Mechanics
Titolo : Anisotropic clustering of inertial particles in homogeneous shear flow
Autore/i : P. GUALTIERI; F. PICANO: C.M. CASCIOLA
Anno : 2009, Numero volume : 629
Pagine da - a : 25-39
Issn : 0022-1120
Nome rivista o titolo libro o atti conferenza : PHYSICS OF FLUIDS
Titolo : Anomalous memory effect on transport of inertial particles in turbulent jets
Autore/i : F. PICANO and G. SARDINA and GUALTIERI P. and C. M. CASCIOLA
Anno : 2010, Numero volume : 22
Pagine da - a : 051705--1--051705--4
Issn : 1070-6631
Doi : 10.1063/1.3432439

MACROAREA : D

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Tele-maintenance intelligent system for technical plants result management

Sistemi di telemanutenzione intelligenti per la gestione di impianti tecnici

The management of technical plant for productivity and safety is generally a complex activity, particularly when many plants distributed in the territory are considered (i.e. the more and more frequent case of outsourced plants maintenance by specialized companies), granted quality and cost results are required (i.e. the case of some rather innovative contract solutions) and the technology involved is heterogeneous and innovative (i.e. electro-mechanical plants).
In order to efficiently achieve the above aims an "intelligent" maintenance¿management system for the distant monitoring and controlling by a remote control center has been developed. The so-called GrAMS (granted availability management system) system is conceived to give to organizations involved in technical¿industrial plants management the possibility to tend to a "well-known availability" and "zero-failures" management.
In particular, this study deals with the diagnostic aspects and safety level of technical plants and with the involvement of ad hoc designed software analysis tools based on neural networks and reliability indicators.

Partner della ricerca

Istituo Superiore per la Prevenzione e la Sicurezza del Lavoro

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Methodologies and techniques for advanced maintenance
Titolo : Intelligent Telematic Maintenance Systems for the Management of
Technical Plants
Autore/i : L.Fedele
Anno : 2011
Pagine da - a : 143-177
Isbn : 978-0-85729-102-8
Nome rivista o titolo libro o atti conferenza : Reliability Engineering and System Safety (RESS) International Journal
Titolo : Tele-maintenance ¿intelligent¿ systems for technical plants result management
Autore/i : M.Concetti, R.Cuccioletta, L.Fedele G.Mercuri
Anno : 2009
Numero volume : 94
Pagine da - a : 63-77
Issn : 0951-8320

MACROAREA : D

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Measuring biomechanical properties of Fast and Slow MLC/mIgf-1 Transgenic Skeletal Muscle Tissue

Misura delle proprietà biomeccaniche del tessuto muscolare scheletrico transgenico MLC/mIgf-1 di tipo lento e veloce

A novel experimental protocol to measure in vitro the most important contractile properties of fast-twitch (EDL) and slow-twitch (soleus) skeletal muscle fibers was proposed and tested on MLC/mIgf-1 transgenic and wild-type mice. Isolated muscles were studied in both isometric and isotonic conditions. The testing protocol we used, allowed for measuring in a single procedure: contraction time, tetanic force, Hill's (F-v) curve, power curve and isotonic muscle fatigue, preserving the tissue viability untill the end of the protocol. Transgenic soleus muscles did not differ from wild-type with regard to any measured variable. Transgenic EDL muscles, which display a mass increase of 29.2% compared to wild-type, showed a 21.5% increased absolute tetanic force and a 34.1% higher absolute maximum power. However, when normalized to muscle cross-sectional area and mass, specific force and normalized power were the same in transgenic and wild-type EDLs, revealing that mIgf-1 expression induces a functional hypertrophy without altering fibrotic tissue accumulation. Isotonic fatigue behavior did not differ between transgenic and wild-type muscles, suggesting that the ability of mIgf-1 transgenic muscle to generate a higher absolute power did not affect its resistance to fatigue.

Altri partecipanti alla ricerca

Antonio Musarò		SSD : BIO/17 - Istologia
Emanuele Rizzuto	Under 40	SSD : ING-IND/12 - Misure meccaniche e termiche
Silvia Carosio	Under 40	SSD : BIO/17 - Istologia

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Cell Metabolism
Titolo : Skeletal Muscle Is a Primary Target of SOD1G93A-Mediated Toxicity
Autore/i : DOBROWOLNY G., AUCELLO M., RIZZUTO E., BECCAFICO S., MAMMUCCARI C., BONCOMPAGNI S., BELLA S., WANNENES F., NICOLETTI C., DEL PRETE Z., ROSENTHAL N., MOLINARO M., PROTASI F., FANO¿ G., SANDRI M., MUSARO¿ A.
Anno : 2008
Numero volume : 8 n 5
Pagine da - a : 425-436
Issn : 15504131
Doi : 10.1016/j.cmet.2008.09.002
Nome rivista o titolo libro o atti conferenza : Annals of Biomedical Engineering
Titolo : Measuring Mechanical Properties, Including Isotonic Fatigue, of Fast and Slow MLC/mIgf-1 Transgenic Skeletal Muscle
Autore/i : DEL PRETE Z., MUSARO¿ A., RIZZUTO E.
Anno : 2008
Numero volume : 36 n 7
Pagine da - a : 1281-1290
Issn : 00906964
Doi : 10.1007/s10439-008-9496-x
Nome rivista o titolo libro o atti conferenza : Journal of Biomechanics
Titolo : Measuring tendon properties in mdx mice: Cell viability and viscoelastic characteristics

Nome rivista o titolo libro o atti conferenza : Cell Metabolism
Autore/i : RIZZUTO E., MUSARO¿ A., CATIZONE A., DEL PRETE Z.
Anno : 2009
Numero volume : 42 n14
Pagine da - a : 2243-2248
Issn : 00219290
Doi : 10.1016/j.jbiomech.2009.06.041

MACROAREA : D
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Finite scale Lyapunov theory on homogeneous turbulence
Teoria di Lyapunov di scala finita sulla turbolenza omogenea
Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Theoretical and Computational Fluid Dynamics
Titolo : Lyapunov analysis for fully developed homogeneous isotropic turbulence
Autore/i : Nicola de Divitiis
Anno : 2010
Doi : 10.1007/s00162-010-0211-9
Nome rivista o titolo libro o atti conferenza : Theoretical and Computational Fluid Dynamics
Titolo : Self-similarity in fully developed homogeneous isotropic turbulence using the lyapunov analysis
Autore/i : Nicola de Divitiis
Anno : 2011
Doi : 10.1007/s00162-010-0213-7

MACROAREA : D
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A novel 3-DOF platform with spherical motion for dynamic posturography
Piattaforma innovativa con 3 gdl a moto sferico per la posturografia dinamica
Dynamic posturography differs from static because it aims to study and analyze the control capability of subjects in more complex conditions than the simple maintenance of the upright unperturbed posture.
The main characteristics of the novel device are:spherical perturbation, reduction of dimensions/weight, settable control or in position or in impedance. The sensorized platform consists of a moving base connected to 3 linear electrical actuators by fixed length floating arms by means of spherical joints; the base is also connected to a spherical joint so that any arbitrary rotation can be imposed around the fixed point. The platform permits an objective evaluation of motor skills and the propose of patient-centered procedures.
The platform finds application both in scientific field, for the investigation of postural strategies in healthy and pathologic subjects, and in clinical practice, for diagnostic and rehabilitative practices.
The platform is currently used at the Neurorehabilitation Dept. of the Children's Hospital Bambino Gesù and we are finalizing the agreement with Fondazione Don Gnocchi for a replica.
Thanks to the novel design the device is patented in Europe and the Spin-off office of Sapienza is currently driving the agreement with BTS Bioengineering.

Altri partecipanti alla ricerca

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Fabrizio Patané	Under 40	SSD : ING-IND/12 - Misure meccaniche e termiche

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Istituti di Santa Maria in Aquiro

Reparto di Neuroriabilitazione Ospedale Pediatrico "Bambino Gesù" Istituto di Ricovero e Cura a Carattere Scientifico

Prof. Alain BERTHOZ - Laboratoire de Physiologie de la Perception et de l'Action del Collège de France di Parigi

Brevetti

Brevetto Europeo "Motorized platform for the therapeutic treatment of patients"

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Measurement Science and Technology

Titolo : Centre of pressure in dynamic posturography: a comparison among systems based on a pressure matrix and a force platform

Autore/i : Stefano ROSSI, Fabrizio PATANÉ, Lorenzo SCALISE, Paolo MARCHIONNI, Paolo CAPPA

Anno : 2010

Numero volume : 21

Pagine da - a : 1-4

Issn : 1361-6501

Doi : doi:10.1088/0957-0233/21/1/015801

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Neural Systems and Rehabilitation Engineering

Titolo : A 3-DOF parallel robot with spherical motion for the rehabilitation and evaluation of balance performance

Autore/i : Fabrizio PATANÉ, Paolo CAPPA

Anno : 2011

Numero volume : 19

Pagine da - a : 157-166

Issn : 1534-4320

Doi : 10.1109/TNSRE.2010.2089535

Nome rivista o titolo libro o atti conferenza : IEEE Transactions on Biomedical Engineering

Titolo : Moment measurement accuracy of a parallel spherical robot for dynamic posturography

Autore/i : Paolo CAPPA, Jennifer L.JACKSON, Fabrizio PATANÉ

Anno : 2010

Numero volume : 57

Pagine da - a : 1198-1208

Issn : 0018-9294

Doi : 10.1109/TBME.2009.2037807

MACROAREA : D

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Mulstistable shape-morphing structures

Strutture multistabili a controllo di forma

Many engineering applications would tremendously benefit from the development of structures which can easily and controllably change shape during operation. We have studied several aspects related to the analytical modelling and the control of multistable structures, i.e. structures characterized by two or more equilibrium configurations.
In particular, we proposed a technique to avoid snap-through instabilities in the transition between opposite equilibria of a buckled beam [ref3]; this technique has been extented to the case of bistable plates [ref1]. It turns out that this represents an important property in many systems where absence of vibrations and stability are primarily requested. Furthermore, we have discovered that even simple orthotropic shallow shells, if suitably curved, could have up to three stable equilibria [ref2]: a quite new result that could open many developments in the production of low-power/high-displacement actuators. We have active cooperations with the major European research groups in the field and, for the contributions cited, I have been recently awarded the AIMETA Junior Prize 2009, a national recognition to young top scientists by the Italian Association of Theoretical and Applied Mechanics.

Partner della ricerca

Institut Jean Le Rond D'Alembert Universitè Pierre et Marie Curie Paris 6
Department of Engineering - University of Cambridge

Brevetti

Two dimensional network of actuators for the control of damping vibrations.
United States Patent 6546316.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES
Titolo : Multiparameter actuation for shape control of bistable composite plates
Autore/i : A. FERNADES and C. MAURINI and VIDOLI S.
Anno : 2010
Numero volume : 47,
Pagine da - a : 1449--1458
Issn : 0020-7683
Doi : 10.1016/j.ijsolstr.2010.02.007
Nome rivista o titolo libro o atti conferenza : PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON. SERIES A
Titolo : Tristability of thin orthotropic shells with uniform initial curvature
Autore/i : VIDOLI S. and MAURINI C
Anno : 2008
Numero volume : 464,
Pagine da - a : 2949--2966
Issn : 1364-5021
Doi : 10.1098/rspa.2008.0094
Nome rivista o titolo libro o atti conferenza : EUROPEAN JOURNAL OF MECHANICS. A, SOLIDS
Titolo : Distributed piezoelectric actuation of a bistable buckled beam
Autore/i : MAURINI C and POUGET J and VIDOLI S.

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES
Anno : 2007
Numero volume : 26 (5)
Pagine da - a : 837--853
Issn : 0997-7538
Doi : 10.1016/j.euromechsol.2007.02.001

MACROAREA : D

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Dynamic chracterization and structural monitoring of monuments

Caratterizzazione dinamica e monitoraggio strutturale di monumenti

Structural monitoring of civil structures using their response to a natural environment is a technique spreading in several countries; many applications to railway and highway bridges can be found in the literature. The application of these techniques to historical structures presents challenges due to the complex geometry, material heterogeneity and uncertainties in the finite element model. This research provides a contribution to these points by the analysis of the response of cases of Italian monuments with different geometry and type of masonry, that is Colosseum, Basilica of Maxentius, Trajan Column and a nineteenth century masonry bridge. The study showed that while the identification of modal parameters is feasible, setting up a procedure for structural monitoring is more involved and requires a comparison between refined mathematical models and reliable experimental results. This comparison has further shown that when dealing with dry masonry structures the mechanical parameters of the solid material are not representative of the assembly since the interactions between blocks have strong influence. In other types of masonry, such as the brick type, the behavior of a specimen is representative of the continuum it comes from and the required updating is limited.

Altri partecipanti alla ricerca

Fabrizio Vestroni SSD : ICAR/08 - Scienza delle costruzioni

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Proceedings of the ISMA2010 Noise and Vibration Engineering Conference, Leuven September 20-23 2010
Titolo : Dynamic characterization of the Basilica of Maxentius in Rome
Autore/i : A. Pau, F. Vestroni
Anno : 2010
Pagine da - a : 1-13
Isbn : 9789073802872
Nome rivista o titolo libro o atti conferenza : Structural Control and Health Monitoring
Titolo : Vibration analysis and dynamic characterization of the Colosseum
Autore/i : A. Pau, F. Vestroni
Anno : 2008
Numero volume : 15
Pagine da - a : 1105-1121
Issn : 1545-2255
Doi : 10.1002/stc.253
Nome rivista o titolo libro o atti conferenza : Advances in Vibration Analysis Research

Nome rivista o titolo libro o atti conferenza : Proceedings of the ISMA2010 Noise and Vibration Engineering Conference, Leuven September 20-23 2010
Titolo : Dynamic characterization of ancient masonry structures
Autore/i : A. Pau, F. Vestroni
Anno : 2011
Pagine da - a : 213-230
Isbn : 978-953-307-209-8

MACROAREA : D

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Dipartimento : Ingegneria strutturale e geotecnica

Experimental and computational analysis of the ventricular torsion in non failing and failing hearts

Torsione e contrazione ventricolari nell¿uomo: fisica, fisiopatologia ed implicazioni cliniche

The research aimed to develop both an experimental line and a computational one.
From the experimental point of view, the research aimed to collect a set of clinical data on the ventricular torsion concerning both non failing and failing hearts. The first data are referred to normal human subjects (about 30 male and female, age between 25 and 40) whereas the latter will be referred to patients in the initial phases of heart disease. The collected data should help to acquire meaningful measures of ventricular strains.
The computational line is based on a mathematical model of left ventricle which includes the complex passive and active response of myocardium in normal conditions and its remodeling in presence of heart disease. The successive numerical analysis aim to simulate the mechanical behavior of the left ventricle along the cardiac cycle.
The model has been elaborated and tuned through the use of the clinical data on normal subjects.
The next steps consist in the development of the geometric remodeling of the left chamber in the first phases of the heart disease, and the development of a minimum model of human electrophysiology based on the results recently published in "Cardiac Physiome project: Mathematical and Modelling Foundations¿, PBMB 104(1-3), 2011.

Altri partecipanti alla ricerca

Paolo Emilio Puddu		SSD : MED/11 - Malattie dell'apparato cardiovascolare
Concetta Torromeo		SSD : MED/11 - Malattie dell'apparato cardiovascolare
Antonietta Evangelista	Under 40	SSD : MED/11 - Malattie dell'apparato cardiovascolare
Luciano Teresi		SSD : ICAR/08 - Scienza delle costruzioni
Valerio Varano	Under 40	SSD : ICAR/08 - Scienza delle costruzioni

Partner della ricerca

LaMS - Universita Roma Tre

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Mechanics Research Communications
Titolo : A simplified mechanical modeling for myocardial contractions and the ventricular pressure¿volume relationships
Autore/i : P. Nardinocchi, L. Teresi, V. Varano
Anno : 2011
Numero volume : 38
Pagine da - a : 532-535
Doi : 10.1016/j.mechrescom.2011.07.002

Nome rivista o titolo libro o atti conferenza : Mechanics Research Communications
Nome rivista o titolo libro o atti conferenza : Progress in Biophysics & Molecular Biology
Titolo : Torsion of the human left ventricle: experimental analysis and computational modelling
Autore/i : A. Evangelista, P. Nardinocchi, P.E. Puddu, L. Teresi, C. Torromeo, V. Varano
Anno : 2011
Doi : 10.1016/j.pbiomolbio.2011.07.008

MACROAREA : D

Ugo Andreaus

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Dipartimento : Ingegneria strutturale e geotecnica

Damage identification in metallic structures via vibrational methods

Identificazione del danno in strutture metalliche mediante metodi basati sulle vibrazioni

The numerical-experimental method of identification of the damage proposed by the research group is based on the consideration of the characteristics of the nonlinear forced vibrations of the structure under examination. Such vibrations are caused by harmonic excitation induced by an electro-magneto-dynamic shaker applied in any position on the structure. The acquisition of the structural response is effected by means of an accelerometer that is also put in a generic position. The processing of the acquired signal by means of spectral analysis and by numerical integration of the acceleration can detect the location and extent of the damage. The advantages of the proposed method consist in the simple equipment of excitation (shaker) and acquisition (accelerometer), the generic nature of the positions of excitation and acquisition and the possibility to detect even small lesions.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS
Titolo : Nonlinear Dynamics of a Cracked Cantilever Beam Under Harmonic Excitation
Autore/i : Anderaus Ugo, Casini Paolo Vestroni Fabrizio
Anno : 2007
Numero volume : 42(3)
Pagine da - a : 566-575
Issn : 0020-7462
Nome rivista o titolo libro o atti conferenza : JOURNAL OF STRAIN ANALYSIS FOR ENGINEERING DESIGN
Titolo : Fatigue crack growth, free vibrations and breathing crack detection of Aluminium Alloy and Steel beams
Autore/i : Andreaus Ugo, Baragatti Paolo
Anno : 2009
Numero volume : 44(7)
Pagine da - a : 595-608
Issn : 0309-3247
Nome rivista o titolo libro o atti conferenza : JOURNAL OF SOUND AND VIBRATION
Titolo : Cracked beam identification by numerically analysing the nonlinear behaviour of the harmonically forced response
Autore/i : Andreaus Ugo, Baragatti Paolo
Anno : 2010
Numero volume : 330(4)
Pagine da - a : 721-742
Issn : 0022-460X

MACROAREA : D

Giovanni Battista Sgritta
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Dipartimento : Scienze statistiche

Job instability and changes in family and household trends (J.i.f.t.)

Precarietà lavorativa e trasformazioni familiari

The research, according to the integrated approach suggested by the new European Employment Strategy, adopted a comparative and interdisciplinary approach. Based on a survey carried on in four EU countries (Italy, Germany, Poland and Slovenia) on national samples of 1300 people aged 25-44 (total sample=5000 people), this research project confirmed the existence of a relation between the labour market policies (especially job instability), women participation into formal work, gender equality in housework and child care, tax/benefit, housing and family policy on the one side, and fertility levels on the other side. The focus was on the identification of both the socio-cultural and economic determinants of family formation and the reproductive choices of the youngest generations, as well as on their implication in policy measures terms.

The research paid also a specific attention to policy measures adopted in the different welfare systems of the participating countries, in order to formulate guidelines for policy makers. Three transnational exchange meetings, four national round tables, a final conference and the redaction of a final report accompanied the project.

Altri partecipanti alla ricerca

Paolo Naticchioni		SSD : SECS-P/01 - Economia politica
	Under 40	
Fiorenza Deriu		SSD : SPS/07 - Sociologia generale
Marcella Corsi		SSD : SECS-P/01 - Economia politica
Graziella Caselli		SSD : SECS-S/04 - Demografia
Marija Mamolo		SSD : SECS-S/04 - Demografia
	Under 40	
Maria Chiara Di Cesare		SSD : SECS-S/04 - Demografia
	Under 40	
Cristina Marcuzzo		SSD : SECS-P/01 - Economia politica

Partner della ricerca

MAX PLANCK INSITUTE FOR DEMOGRAPHIC RESEARCHPrivate Non-Profit Making organisation (NGO)Research institutesAddress : Konrad-Zuse-Str. 118057ROSTOCKDE - Deutschland

Science and the Research Centre of Koper (UP ZRS Koper), University of PrimorskaSemi-state or parapublic organisationResearch institutesAddress : Garibaldijeva 186000.00City : KoperSI - Slovenija

Institute of Statistics and Demography , Warsaw School of EconomicsSemi-state or parapublic organisationResearch institutesAddress Al.. Niepodległości 16202-554WarsawPL - Poland

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Fondazione Giacomo BrodoliniPrivate Non-Profit Making organisation (NGO)Via A. Depretis 65RomeItalia

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Generazioni flessibili. Nuove e vecchie forme di esclusione sociale, Villa P. (a cura di)
Titolo : Instabilità lavorativa e strategie familiari: uno studio comparativo
Autore/i : Deriu F.
Anno : 2007
Isbn : 978-88-430-4319-4
Nome rivista o titolo libro o atti conferenza : Job Instability and Family Trends in: Quaderni della Fondazione Giacomo Brodolini
Titolo : Job Instability and Family Trends
Autore/i : AA.VV. Deriu F., Mamolo M., Beranrdi L., Di Cesare M.C., Di Giulio P., Naticchioni P., Muzi S.
Anno : 2007
Isbn : 978-88-95380-02-5
Nome rivista o titolo libro o atti conferenza : Orizzonti difficili. Instabilità lavorativa e scelte familiari a Roma
Autore/i : Deriu F. (a cura di)
Anno : 2008
Isbn : 978-88-430-4512-9

MACROAREA : D
Enzo Orsingher
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Dipartimento : Scienze statistiche
Interazioni fra equazioni frazionarie e processi aleatori
Si vuole analizzare l'interplay tra equazioni alle derivate parziali frazionarie e processi stocastici. Le leggi di probabilità di un ampia classe di processi aleatori sono soluzioni di problemi di Cauchy di equazioni frazionarie. Si è inoltre visto che queste leggi di probabilità sono collegate ad equazioni alle derivate parziali di ordine superiore e quindi alla teoria dei pseudo-processi (con densità di misura a segno variabile). Lo scopo della ricerca è di esplorare ulteriormente questi legami e di anallizare fenomeni che possono essere modellizzati da processi legati ad equazioni frazionarie. Recentemente è stato pubblicato un articolo sulle vibrazioni di strutture rigide (sbarre, travi, piatti) in cui l'analisi è basata sulle equazioni frazionarie e i corrispondenti processi. Un altra direzione di ricerca riguarda le estenzioni dei processi di Cauchy e l'interazione con equazioni di Laplace di ordine superiore.

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : Probability Theory and Related Fields
Titolo : Time-fractional telegraph equations and telegraph process with Brownian time
Autore/i : Enzo Orsingher, Luisa Beghin
Anno : 2004
Numero volume : 128
Pagine da - a : 141 - 160
Nome rivista o titolo libro o atti conferenza : The Annals of Probability
Titolo : Fractional diffusion equations and processes with randomly-varying time
Autore/i : Enzo Orsingher, Luisa Beghin

Nome rivista o titolo libro o atti conferenza : Probability Theory and Related Fields

Anno : 2009

Numero volume : 37

Pagine da - a : 206 -249

Nome rivista o titolo libro o atti conferenza : Electronic Journal of Probability

Titolo : Fractional Poisson processes and related random motions

Autore/i : Enzo Orsingher, Luisa Beghin

Anno : 2009

Numero volume : 14

Pagine da - a : 1790 - 1826

MACROAREA : D

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Work/Life Balance. Survey on Electric Sector Women Employed Work/Life Balance needs

Conciliazione tra tempi di lavoro e tempi di vita. Indagine conoscitiva sulle esigenze delle donne dipendenti delle Aziende del settore elettrico

The conciliation between life and work times and between them and mobility times is just a gordian knot in the Western countries in respect of the labour market and the social organization as a whole. It is a too long time that the solution has been looking for through individual conciliations and not the right for a system conciliation. It is a too long time that the problem has been considered an exclusive question for women and people did not become aware of its consequences influence the birth reduction but also the organization of the growth of the sons. The care for old people, for example, mainly assigned to the families, will influence more and more the budget time of the workers because of the life average prolongation and the gradual ageing of the population. The survey on this issue, made for the first time in Italy in six of the most important companies of the electric division by a research team of the Sapienza University of Rome, tends to verify the conditions of inequality in this division. The data are going to direct the trade unions action towards conciliations and work flexibility policies. They have to be more suitable, as United States and Europe are testing, to the different actors involved: workers, employers and the other social actors, women and men.

Altri partecipanti alla ricerca

Lorella Cedroni	SSD : SPS/04 - Scienza politica
Marisa Ferrari Occhionero	SSD : SPS/07 - Sociologia generale

Partner della ricerca

Federazione Lavoratori Aziende Elettriche Italiane

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Conciliazione tra tempi di lavoro e tempi di vita. Indagine conoscitiva sulle esigenze delle donne dipendenti delle Aziende del settore elettrico
Autore/i : Ferrari Occhionero Marisa, Lorella Cedroni, Mariella Nocenzi, Anastasia Cinti, Denise De Marco
Anno : 2011
Pagine da - a : 1-175
Isbn : 978-88-498-2920-4

MACROAREA : D

Fiorenza Deriu
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Dipartimento : Scienze statistiche

Risk and insecurity: job instability, life courses and insurance strategies. A research on economic, insurance and social security strategies adopted by young generations

Rischio e sicurezza: precarietà lavorativa, corsi di vita e strategie assicurative. Una ricerca sulle forme di tutela economica, assicurativa e previdenziale dei giovani italiani.

During last decades, relevant changes in the labour market as well as in the pension system occurred all over Europe. In Italy, as an example, the growing deregulation of the labour market was accompanied by some important reforms in the social security field resulting in the transition to a pension system based on insurance deductions. These further changes

added uncertainty among young people spreading a feeling of insecurity.
The research moved from the following main questions: in light of the new emerging risks marked by a growing uncertainty, which are the strategies of coping adopted by young generations? How are the narratives of young people affected by prolonged job instability, low wages and professional careers fragmentation?
A mixed quali-quantitative approach was adopted, from ¿focus groups¿ and consultation of experts carried out with Delphi technique, to a survey carried out on a national sample of 1300 young adults aged 25-44. Data analysis pointed out the difficulties affecting non standard workers who are not able to prevent themselves from the risks arising from shorter periods of insurance deductions due to more fragmented and instable working careers.

Altri partecipanti alla ricerca

Marcella Corsi		SSD : SECS-P/01 - Economia politica
Mariella Nocenzi		SSD : SPS/07 - Sociologia generale
Giovanni Battista Sgritta		SSD : SPS/07 - Sociologia generale
Luca Carlo Giuliano		SSD : SPS/07 - Sociologia generale
Carlo D'Ippoliti	Under 40	SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Rapporto sullo Stato Sociale 2011. Questione giovanile, crisi e welfare state, Pizzuti F. R. (a cura di)
Titolo : Il futuro pensionistico dei giovani lavoratori atipici
Autore/i : Deriu F.
Anno : 2011
Pagine da - a : 353-373
Isbn : 978-88-244-5864-1
Nome rivista o titolo libro o atti conferenza : Rapporto sullo Stato Sociale 2011. Questione giovanile, crisi e welfare state, Pizzuti F. R. (a cura di)
Titolo : I giovani, la crisi. il welfare
Autore/i : Sgritta G. B.
Anno : 2011
Pagine da - a : 51-79
Isbn : 978-88-244-5864-1

MACROAREA : D

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Dipartimento : Storia, disegno e restauro dell'architettura

Benedictine Foundations in Marches. Materials for an historical-geographic Atlas of territorial system of settlements

Le fondazioni benedettine nelle Marche. Materiali per un Atlante storico-geografico del sistema insediativo territoriale

The idea of cultural heritage has been extended from the single monument to the context and the landscape, at the same time its management and promotion need suitable investigation's tools.
In this field the research on Benedictine Foundations in Marches realized a Geographic IT System as a useful instrument for the territorial government, which allows the access to large databases for many types of users.
With this aim computer technologies and interaction between different disciplinary competences -History and Drawing- were employed.

In the historical-geographic Atlas (structured in maps, itineraries and catalogue archive) the 'objects' -Abbeys Priories and Monasteries- are interpreted in relationship with their territorial connections and architectonic structures, using different scales, under properly selected themes and chronological phases.
This has allowed the formulation of many critical and diachronic readings of the historical landscape from the Marches which still characterizes the contemporary landscape.
The volume which collects the research's outcomes received the honour mention from Salimbeni Prize for History and Art Criticism 2007-XXXII edition, with the High Patronage of the Republic President and the aegis of MIBAC, MIUR and Ministry of Foreign Affairs.

Altri partecipanti alla ricerca

Maria Luisa Neri SSD : ICAR/18 - Storia dell'architettura

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Atlante storico-geografico delle fondazioni benedettine delle Marche dopo la riforma cluniacense
Titolo : La rappresentazione della storia, curatela
Autore/i : IPPOLITI E.
Anno : 2007
Pagine da - a : 75-140
Isbn : 978-88-495-0853-6
Nome rivista o titolo libro o atti conferenza : Atlante storico-geografico delle fondazioni benedettine delle Marche dopo la riforma cluniacense
Titolo : L'informatica e il pensiero cieco. Nuovi apparati per la rappresentazione della storia
Autore/i : IPPOLITI E.
Anno : 2007
Pagine da - a : 75-104
Isbn : 978-88-495-0853-6
Nome rivista o titolo libro o atti conferenza : Atlante storico-geografico delle fondazioni benedettine delle Marche dopo la riforma cluniacense
Titolo : L'atlante storico-geografico, curatela
Autore/i : DOTI G, IPPOLITI E., MAGIONAMI A, NERI M.
Anno : 2007
Pagine da - a : 141-464
Isbn : 978-88-495-0853-6

MACROAREA : D

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Dipartimento : Storia, disegno e restauro dell'architettura

Multidisciplinary assessment of the conditions of instability in a historic building: the case of the Patriarchate of Pec-Peje in Kosovo

Valutazione multidisciplinare delle condizioni di dissesto in un edificio storico: il caso del Patriarcato di Pec-Peje in Kosovo

The complex of Patriarchate is an excellent fusion of different buildings and structures built during three centuries. A particular effort has been made to understand the historical transformations of the churches and nature and position of structural interventions in 1930. The Patriarchate¿s current structural situation is quite complex to define: thanks to a

recent plaster on the external walls it appears in good conditions, but inside the building cracks and deformations on walls are particularly marked and worrying. We can observe that most of cracks are filled with different kinds of mortar and we understood the necessity to analyse things under an historical point of view. Monitoring the complex have been posing sensors on the most important cracks that could be analysed without damaging inner frescoes. The results of monitoring gave a useful contribution, together with factors like an historical and technical knowledge of the building. Correct interpretation coldn't be done without knowing the exact transformation of building and without checking structure with calculations. Final results have been quite interesting, proving the quite sufficient balance in static condition and the major risk with a dinamic impulse from an earthquake.

Altri partecipanti alla ricerca

Agdalgisa Donatelli	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

Lambda spa

Intersos ONG

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : "Bollettino dell'ICR"

Titolo : Monitoraggio strutturale e conoscenza storico-costruttiva dell?architettura:
il caso del Patriarcato di Peć in Kosovo

Autore/i : Donatella Fiorani

Anno : 2010

Numero volume : 20-21

Pagine da - a : 112-131

Issn : 1594-2562

MACROAREA : E

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Dipartimento : Filosofia

Hans Jonas and The Ancient Thought: Some Unpublished Manuscripts

Hans Jonas e il pensiero antico: alcuni manoscritti inediti

The project is about two unpublished courses by Hans Jonas, that have been/will be made available for the first time to the scholarly debate:

1. a typescript (331 pp.), exactly 14 lectures, entitled Problems of Freedom (Spring 1970, Jonas Archiv, Sign. HJ 1-3-1 and HJ 1-3-2); as a first step, last year I published the text: see H. Jonas, Problemi di libertà, a c. di E. Spinelli, con la collab. di A. Michelis, Nino Aragno Editore, Torino 2010, pp. LVII-466, ISBN 9788884194442; here Jonas adopts the typical tools (both philosophical and historical) of his hermeneutical approach in order to present an original account (that ranges from the archaic period until Augustine) of a plurality of different, and sometimes even antagonistic concepts of freedom;

2. a typescript (153 pp.), exactly 9 lectures, entitled Theories of Time (27 sept.-27 nov. 1971, Jonas Archiv, Sign. HJ 3-6); here Jonas offers a detailed discussion of Plato's Timaeus, Aristotle's Phys. IV and Plotinus's Enn. III 7, the most important philosophical ancient texts on the prickly question of time; I am currently preparing a complete edition of this course too (original text+Italian transl., by E. Spinelli/F. Verde, with an introduction and a rich bibliography); it will be published by Nino Aragno Editore, in 2013.

Altri partecipanti alla ricerca

Francesco Verde Under 40 SSD : M-FIL/07 - Storia della filosofia antica

Partner della ricerca

Alexander von Humboldt Stiftung, Germania

Philosophisches Archiv, Universitaet Konstanz, Germania

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : I filosofi e l'Europa, a cura di R. Pozzo e M. Sgarbi

Titolo : "Il pericolo del mondo": filosofia stoica vs. cristianesimo antico nell'interpretazione di Hans Jonas

Autore/i : E. Spinelli

Anno : 2009

Pagine da - a : 59-68

Isbn : 978-88-8483-854-4

Nome rivista o titolo libro o atti conferenza : "Bollettino della Società Filosofica Italiana", N.S., 196

Titolo : Antiche antropologie a confronto: temi stoici e cristiani in Hans Jonas, , pp. 14-21

Autore/i : E. Spinelli

Anno : 2009

Pagine da - a : 14-21

Issn : 1129-5643

Nome rivista o titolo libro o atti conferenza : H. Jonas, Problemi di libertà

Autore/i : a c. di E. Spinelli (con la collab. di A. Michelis)

Anno : 2010

Isbn : ISBN 9788884194442

MACROAREA : E

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Dipartimento : Filosofia

La testimonianza di Sesto Empirico sull'Accademia scettica

The aim of the book is to offer a detailed critical examination of the testimony on the philosophy of the skeptical Academy found in one of our chief sources, Sextus Empiricus. The book's main discussion is divided into three chapters: the first deals with the testimony on the skeptical Academy found in the first book of PH, while the second and third chapters explore, respectively, the testimony on Arcesilaus and Carneades found in the course of Sextus' discussion of the criterion of truth in the first extant book of M. As far as Arcesilaus is concerned, the book brings out that the account given at M VII 150-8 is not, as usually thought, incompatible with that found at PH I 232-4, since in the former passage, too, Sextus seems to acknowledge that Arcesilaus is much closer to Pyrrhonism than the other Academics. As far as Carneades is concerned it shows that the section M VII 159-89 gives an inconsistent account of Carneades' outlook, since the convincing representation is presented as a practical criterion but at other times it is presented as an epistemic criterion and as something to which one assents as being true. Sextus' testimony on Arcesilaus is intentionally ambiguous in not clearly distinguishing between the dialectical strategy and Arcesilaus' stance.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Pyrrhonists, Patricians, Platonizers. Hellenistic Philosophy in the Period 155-86 B.C.

Titolo : L'assenso in Clitomaco: un problema di linguaggio? Napoli

Nome rivista o titolo libro o atti conferenza : Pyrrhonists, Patricians, Platonizers. Hellenistic Philosophy in the Period 155-86 B.C.
Autore/i : A.M. IOPPOLO D.N. SEDLEY(eds)
Anno : 2007
Pagine da - a : 227-67
Nome rivista o titolo libro o atti conferenza : Revue de Métaphysique et de Morale
Titolo : Arcésilas dans le Lucullus de Cicéron, ?Revue de Métaphysique et de Morale? 21-44.
Anno : 2008
Numero volume : 1
Pagine da - a : 21-44

MACROAREA : E

paolo santangelo

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Dipartimento : Istituto italiano di Studi orientali-ISO

the representation of emotions and imagery in Ming Qing China

la rappresentazione delle emozioni e dell'immaginario nella Cina Ming e Qing

The research has been organized on the basis of several years of studies both on the theoretical and practical contributions by previous works in history, anthropology, social psychology and lexicography (Le Goff, Nora, Verene, Fevbre, Averill, Ronsaldo, Lakoff, Wierzbiska, etc.) as well as on exchange of opinions with specialists in international seminaries and conferences.
The purpose is the reconstruction of the so-called mental structure of late imperial Chinese culture, through the collection of fragments of the system of various cognitive and practical aspects of the 'world of mind and body' (see Santangelo, Brill publ., 2003). They are reflected in the common manner of classifying and judging, beyond the rational and conscious theories of the time, the perception of the self, the sense of responsibility, health and illness concepts, belief systems, and the ladder of values.
The method is based on a textual analysis of selected significant documents, with a database collection of all information concerning imagery and memory, states of mind, sensorial and bodily sensations. The final products are essays, glossaries and translations of such sources.

Partner della ricerca

National University of Singapore
Alma Mater Studiorum, Bologna, Dipartimento di Psicologia
Christian-Albrechts-Universität zu KielChinese Studies

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Materials for an Anatomy of Personality in Late Imperial China
Autore/i : Paolo Santangelo
Anno : 2010
Numero volume : 1
Pagine da - a : 1-524
Issn : 1878-8084
Isbn : 978-90-04-17753-6
Nome rivista o titolo libro o atti conferenza : Shan'ge. Canti d'amore a Suzhou nella Cina Ming
Autore/i : Paolo Santangelo
Anno : 2010

Nome rivista o titolo libro o atti conferenza : Materials for an Anatomy of Personality in Late Imperial China
Numero volume : 1
Pagine da - a : 1-349
Isbn : 978-88-6381-145-2
Nome rivista o titolo libro o atti conferenza : Zhongguo lishi zhongde qinggan wenhua - dui Ming Qing wenxian de kuaxueke wenben
Autore/i : Paolo Santangelo [Shi Hualuo]
Anno : 2009
Numero volume : 1
Pagine da - a : 1-682
Isbn : 978-7-100-05858-2

MACROAREA : E

Luca Milasi
Under 40
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Dipartimento : Istituto italiano di Studi orientali-ISO

Meiji Writers and Chinese Literature: the influence of Chinese fiction on the works of Mori Ogai (1862-1922), Natsume Soseki (1867-1916)and Koda Rohan (1867-1947).

Gli scrittori Meiji e la letteratura cinese: suggestioni letterarie nella produzione di Mori Ogai (1862-1922), Natsume Soseki (1867-1916), Koda Rohan (1867-1947).

Chinese culture, which had shaped the forma mentis of the Japanese literati for centuries, extended its influence on the literary estabilishment up to the Modern Era: preeminent Japanese writers of the Meiji Era, such as Mori Ogai (1862-1922) and Natsume Soseki (1867-1916) were among the last few Japanese writers to receive an early training in the Chinese Classics which, along with the literary conceptions imported from the West, exerted considerable impact on the literature of their mature years. The introduction of Western thought in Japan caused the intellectuals to challenge the way they had judged the value of literary works; it is my aim to bring concrete examples of how this process in turn worked towards positively influencing the process of rediscovery of forgotten Chinese and Japanese works by modern scholars. Through a comparative analysis of the Meiji literati¿s involvement with rediscovering the Japanese and Chinese past and their usage of Western methods, my research focuses on clarifying how the modern eye introduced the Japanese to a more mature approach to the study of Chinese culture and language and helped them appreciate better their own cultural heritage. The views on Chinese literature shared by scholars who contributed to the forums of the Mid-Meiji period, such as Mori Kainan (1863-1911) and Koda Rohan (1867-1947), another well-known novelist of the period and acclaimed scholar of Chinese, also contributed to inspire concrete examples of a literary conception that encompasses sources from both the Western and the Asian tradition, mirroring an almost unique feature of the Meiji literati¿s broad range of knowledge (sekigaku).

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Gli scrittori Meiji e la Cina
Titolo : Gli scrittori Meiji e la Cina
Autore/i : Luca Milasi
Anno : 2011
Pagine da - a : 1-348
Isbn : 9788862921121
Nome rivista o titolo libro o atti conferenza : Phoenix in Domo Foscari - The Online Journal of Oriental Studies
Titolo : A Meiji Writer's outlook on Chinese Literature: the case of Mori Ogai

Nome rivista o titolo libro o atti conferenza : Gli scrittori Meiji e la Cina
Autore/i : Luca Milasi
Anno : 2010
Numero volume : Issue n°2
Pagine da - a : 253-291
Isbn : 978-88-6381-046-2
Nome rivista o titolo libro o atti conferenza : Rivista degli Studi Orientali, dipartimento di Studi Orientali, Università "Sapienza"
Titolo : Rekishi Shosetsu o lettura di genere? La condizione femminile in due racconti storici di Mori Ogai
Autore/i : Luca Milas
Anno : 2009
Numero volume : Vol. LXXXI, 1-2 (2008)
Pagine da - a : 205-256
Issn : 0392-4866

MACROAREA : E

Teresa Ciapparoni

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Dipartimento : Istituto italiano di Studi orientali-ISO

Europe and Japan. Interactions.

Europa e Giappone. Incontri e scambi.

Because of the still perduring influence of Japonisme, Japan is often thought of as a different, exotic country. The aim of my research has been to show how this vision is misleading and how extensively Japanese culture is interweaved with our European experience. I started investigating the work of early Italian diplomats in Japan: Cristoforo Robecchi (1821-1891), Vittorio Sallier de La Tour (1827-1894) and his wife Madame Mathilde Sallier de la Tour (1838-1910) (some are earlier publications) in order to be able to evaluate both the image of Italy they conveyed to Japan and the image of Japan to Italy. Next I focused on travellers of both countries such as Pietro Savio (1838-1904) and Japanese friends of archeologist Giacomo Boni (1859-1925) because unofficial exchanges were important in moulding a new Japanese sensitiveness. I studied the writers who innovated form and content of their works during the Meiji period (1868-1912) and then I examined some Japanese writers who have elected to live in Europe and even to write in European languages. The reseach has also considered coinciding classical stories collections in Europe and Japan and the spreading interest in Europe for a pivotal modern writer like Akutagawa Ryunosuke (1892-1927).

Altri partecipanti alla ricerca

Daniela Sadun	SSD : L-OR/20 - Archeologia, storia dell'arte e filosofie dell'Asia orientale
Matilde Mastrangelo	SSD : L-OR/22 - Lingue e letterature del Giappone e della Corea

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Pagine dal Giappone Meiji (1868-1912)
Titolo : La formazione della letteratura moderna. La letteratura giapponese verso Occidente.
Autore/i : Teresa Ciapparoni
Anno : 2009
Numero volume : Quaderni giapponesi - 2
Pagine da - a : 283-306
Isbn : 978-88-7870-401-5
Nome rivista o titolo libro o atti conferenza : Literature and Literary Theory

Nome rivista o titolo libro o atti conferenza : Pagine dal Giappone Meiji (1868-1912)
Titolo : The European Border of Japanese Literature
Autore/i : Atsuko Ueda and Rchard H. Okada
Anno : 2008
Numero volume : 9
Pagine da - a : 93-99
Issn : 1531-5533
Nome rivista o titolo libro o atti conferenza : Italiani nel Giappone Meiji (1868-1912)
Titolo : I viaggi di Pietro Savio (1838-1904)
Autore/i : Teresa Ciapparoni, Pierfrancesco Fedi, Maria Teresa Lucidi
Anno : 2007
Pagine da - a : 96-105

MACROAREA : E

Victoria Rimell
Under 40
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Email : vrimell@hotmail.it
Dipartimento : Scienze dell'antichità

Intertextuality and intersubjectivity: from Ovid to Martial

Intertestualità e intersoggetività: da Ovidio a Marziale

In stage 1 of my research, I worked on Ovidian poetry (his elegiac texts and Metamorphoses), and was concerned with how desiring subjects interact with and seduce each other in these texts. My aim was to shift the focus in Roman studies from intertextuality to intersubjectivity, in order to explore more thoroughly the relationship between self and other, and between male and female worlds, which lies at the heart of Ovid's vision of poetry and the imagination. My work moves beyond the more often asked questions of Ovid, such as whether he is 'for' or 'against' women, analysing instead how gendered subjects converse, compete and co-create. In particular, I looked at how the tale of Medusa, alongside that of Narcissus, reverberates throughout Ovid's oeuvre, becoming a core myth for his poetics.
In stage 2, my interest in interconnection and permeability took a different route. The result is a book which overhauls our understanding of Martial's epigrammatic aesthetic. My work shows how Martial reinvents epigram so that it enacts the sociality of urban life, to the effect that Rome itself appears to rise out of epigram's architecture and gestures. In grasping the nuances of poetic interaction within and between books, I argue, we get to grips with social and political manoeuvring.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Ovid's Lovers. Desire, Difference and the Poetic Imagination
Autore/i : Victoria Rimell
Anno : 2006
Pagine da - a : 1
Isbn : 978-0-521-86219-6
Nome rivista o titolo libro o atti conferenza : Martial's Rome. Empire and the Ideology of Epigram
Autore/i : Victoria Rimell
Anno : 2008
Isbn : 978-0-521-82822-2

MACROAREA : E

Giacomo Pardini

Under 40

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Dipartimento : Scienze dell'antichità

Numismatica e archeologia. Ritrovamenti monetali a Ostia e Pompei. Stratigrafie, contesti e circolazione

Altri partecipanti alla ricerca

Renata Cantilena		SSD : L-ANT/04 - Numismatica
Mario Piacentini		SSD : FIS/07 - Fisica applicata (a beni culturali, ambientali, biologia e medicina)
Steven J.-R. Ellis	Under 40	SSD : L-ANT/07 - Archeologia classica

Partner della ricerca

Dipartimento di Scienze del Patrimonio Culturale, Università degli Studi di Salerno

Department of Classics, University of Cincinnati - Cincinnati OH, USA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : RIVISTA ITALIANA DI NUMISMATICA E SCIENZE AFFINI

Titolo : Due monete contromarcate NCAPR dallo scavo delle pendici nord-orientali del Palatino

Autore/i : Giacomo Pardini

Anno : 2009

Numero volume : 110

Pagine da - a : 233-260

Issn : 1126-8700

Nome rivista o titolo libro o atti conferenza : Pompei. Rinvenimenti monetali nella Regio VI

Autore/i : Renata Cantilena

Anno : 2008

Numero volume : 14

Isbn : 88-85914-45-4

Titolo : Pompei. Rinvenimenti monetali nell¿Insula VIII.7.1-15. Contesti e circolazione

Autore/i : Giacomo Pardini

MACROAREA : E

Clementina Panella

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Dipartimento : Scienze dell'antichità

Economic history of ancient Rome to the light of the archaeological documentation

Economis History of Ancient Rome

Storia economica di Roma alla luce delle fonti archeologiche

The research addresses three themes. The first concerns the material culture in the Mid and Late Republic, as inferred through two main indicators: amphorae and black glazed ware. An analysis of available data enables us to trace a general picture of the emergence and growth of these classes of materials, their origin and territorial distribution, and also of the weight and meaning of their commercial flows in economic and cultural terms. The second theme deals with the exploitation of the italic regions specializing in intensive agriculture (wine and olives) aimed at markets both before

and after the Second Punic War,using epigrahic or archaeological sources for the reconstruction of the different agricultural environments of the peninsula. The third theme deals with the consumption in Rome. The traces of vineyards in the suburbia, and the scarcity of amphorae in urban stratigraphies lead us to think that there was a certain level of self sufficiency in commodities of common use such as wine. The meaning of this phenomenon is discussed, and it is suggested that the structured organization of the suburban territory that existed since the 3rd BC was able to provide for the needs of the rapidly
growing population of the metropolis.

Altri partecipanti alla ricerca

Antonio Ferrandes	Under 40	SSD : L-ANT/10 - Metodologie della ricerca archeologica
Marta Casalini	Under 40	SSD : L-ANT/10 - Metodologie della ricerca archeologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Facta
Titolo : Roma, il suburbio e l'Italia in età medio- e tardo-repubblicana: cultutra materiale, territori, economie
Autore/i : C. Panella
Anno : 2010
Numero volume : 5
Pagine da - a : 11-124
Issn : 1123-5713
Nome rivista o titolo libro o atti conferenza : Vino.Tra mito e cultura (eds. M.G.Lungarotti, M. Torelli)
Titolo : La viticoltura e il vino nell'Italia romana tra produzione e mercato (III-I secolo a.C.)
Autore/i : C. Panella
Anno : 2006
Pagine da - a : 41-54

MACROAREA : E

GLORIA OLCESE

SSD : L-ANT/10 - Metodologie della ricerca archeologica
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Dipartimento : Scienze dell'antichità

IMMENSA AEQUORA. Archaeological, archaeometrical and computational researches for the reconstruction of the economy and trade in the Western basin of the Mediterranean Sea.

IMMENSA AEQUORA. Ricerche archeologiche, archeometriche e informatiche per la ricostruzione dell'economia e dei commerci nel bacino occidentale del Mediterraneo.

The project aims at improving the knowledge of the Roman economy and trade in the Western Mediterranean Sea (4th cent.BC-1st cent.AD), thanks to the use of modern research methodologies (laboratory analyses to determine the origin of materials).
The project is focused on the study of pottery production centers and related ceramics. Pottery is one of the most important markers used by archaeologists to identify chronologies and to reconstruct trade routes.
One of the results is the creation of a dedicated website: www.immensaae
quora.org.
Ischia is one of the main sites studied in the project. The study of the ceramic kilns beneath the Church of S. Restituta has shed light on the production and circulation of Graeco-Italic amphorae and other wares in the Gulf of Naples and in the Western Mediterranean.
Another result is the publication of an Atlas of pottery production sites, which comprises a list of shipwrecks containing transport amphorae produced in the Tyrrhenian area. A Database (soon online) was made by Cilea (Milan) containing

data on pottery production sites and analyzed samples, to allow comparisons between archaeological and archaeometric information.
An International Workshop has been held at Sapienza University to present and discuss the results of the project

Altri partecipanti alla ricerca

CATERINA MARIA COLETTI		SSD : L-ANT/10 - Metodologie della ricerca archeologica
STEFANIA GIUNTA	Under 40	SSD : L-ANT/10 - Metodologie della ricerca archeologica
ILARIA MANZINI	Under 40	SSD : L-ANT/10 - Metodologie della ricerca archeologica

Partner della ricerca

Soprintendenza Speciale per i Beni Archeologici di Roma - Sede di Ostia
CNR - IGG (Istituto di geoscienze e georisorse del CNR)
CILEA Milano

Brevetti

Database IMMENSA AEQUORA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Le anfore greco italiche di Ischia: archeologia e archeometria
Autore/i : Olcese G.
Anno : 2010
Isbn : 978-88-7140-450-9
Nome rivista o titolo libro o atti conferenza : Bollettino di Archeologia on-line. Roma 2008: XVII International Congress of Classical Archaeology. Meetings between cultures in the Ancient Mediterranean
Titolo : Produzione e circolazione di ceramiche e anfore dall'area tirrenica centro-meridionale (fine IV secolo a.C. ¿ I secolo d.C.): i dati della ricerca archeologica e archeometrica. Alcuni obiettivi della sessione e un progetto in corso
Autore/i : Olcese G.
Anno : 2010
Numero volume : 1
Issn : 2039 - 0076
Nome rivista o titolo libro o atti conferenza : EMAC'07, 9th European meeting on Ancient Ceramics. Budapest, Hungary, October 24-27, 2007
Titolo : Graeco-Italic amphorae in the region of Ostia: archeology and archaeometry
Autore/i : Olcese G., Thierrin-Michael G.
Anno : 2009
Pagine da - a : 159-164
Isbn : 978-963-7061-67-7

MACROAREA : E

LORENZO NIGRO

SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
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Dipartimento : Scienze dell'antichità

The Temple of the Kothon at Motya, Western Sicily: from the Study of Phoenicians' expansion through the Mediterranean to Scenario for a multidisciplinary research connecting archaeology, molecular medicine, high-tech, geophysics, 3D digital photogrammetry

IL TEMPIO DEL KOTHON A MOZIA: DALLO STUDIO DELL'ESPANSIONE FENICIA NEL MEDITERRANEO A SCENARIO PER UNA RICERCA MULTIDISCIPLINARE TRA ARCHEOLOGIA E MEDICINA MOLECOLARE,

NANOTECNOLOGIE, GEOFISICA E FOTOGRAMMETRIA DIGITALE 3D

Motya, the Phoenician city in western Sicily, is a strategic site for the study of Mediterranean civilizations, a highly performative scientific laboratory of Sapienza.

The discovery and systematic excavation of the Temple of the Kothon has radically changed the historical reconstruction of Phoenician colonization, showing that the island was occupied early in the 8th century BC, before the foundation of the first Greek colonies, as reported by the historian Tucidides (VI, 2, 6). The Temple of the Kothon was included within a huge sacred precinct, a Circular Temenos of 118 m of diam. Such a circle revealed a series of sacred buildings and installations with, in the middle, a rectangular pool. The complex was devoted to the cult of underground waters (Baal ?Addir = Poseidon was the main god with Astarte), but served also for stars observation by night, through trigonometry of celestial corps mirrored on water.

Motya, due to the Pilot Project of Sapienza Expedition, has become a multidisciplinary laboratory, ranging from ancient DNA, to interrelated geophysics and informatics, to high-tech (node sensors), to restoration (artifacts, and monuments) and 3D digital photogrammetry, shading light not only on history, but also on several scientific excellences of Rome Sapienza University.

Altri partecipanti alla ricerca

CHIARA PETRIOLI		SSD : INF/01 - Informatica
FRANCESCO GUIZZI		SSD : L-ANT/03 - Storia romana
MARCELLO BARBANERA		SSD : L-ANT/07 - Archeologia classica
GAIA MASELLI	Under 40	SSD : INF/01 - Informatica
FABIO PELLACINI		SSD : INF/01 - Informatica
STEFANO FERRARI		SSD : ICAR/19 - Restauro
MAURA SALA	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
LAURA OTTINI		SSD : MED/03 - Genetica medica
VALENTINA TUMOLO	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
GAIA RIPEPI	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
PIERFRANCESCO VECCHIO		SSD : L-OR/01 - Storia del vicino oriente antico
FEDERICA SPAGNOLI	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
ALESSANDRO DE BONIS	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
SARA GIARDINO	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
ADRIANO ORSINGHER	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
NICOLA CHIARENZA	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
ELISABETTA GALLO	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
DARIA MONTANARI	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
ALICE CALTABIANO	Under 40	SSD : L-OR/06 - Archeologia fenicio-punica
SABRINA ZOLLO	Under 40	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico

Partner della ricerca

Istituto Nazionale di Geofisica e Vulcanologia

Istituto Superiore per la Conservazione e il Restauro di Roma

Servizio Beni Archeologici della Soprintendenza Regionale per i Beni Culturali e Ambientali di Trapani

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : L. Nigro (a cura di), Motya and the Phoenician Repertoire between the Levant and the West, 9th - 6th century BC. Proceedings of the International Conference held in Rome, 26th February 2010 (Quaderni di Archeologia Fenicio-Punica, V)

Titolo : Alle origini di Mozia: stratigrafia e ceramica del Tempio del Kothon dall'VIII al VI secolo a.C.

Autore/i : L. Nigro

Anno : 2010

Pagine da - a : 1-48

Issn : 1824-4017

Isbn : 88-88438-03-3

Nome rivista o titolo libro o atti conferenza : S. Helas - D. Marzoli (Hrsg.), Phönizisch und punisches Städtewesen. Akten der internationalen Tagung in Rom vom 21. bis 23. Februar 2007 (Iberia Archaeologica Band 13)

Titolo : Il Tempio del Kothon e il ruolo delle aree sacre nello sviluppo urbano di Mozia dall'VIII al IV secolo a.C.

Autore/i : L. NIGRO

Anno : 2009

Pagine da - a : 241-270

Isbn : 978-3-8053-4111-0

Nome rivista o titolo libro o atti conferenza : Il Tempio del Kothon. Rapporto preliminare delle campagne di scavo XXIII e XXIV (2003-2004) condotte congiuntamente con il Servizio Beni Archeologici della Soprintendenza Regionale per i Beni Culturali e Ambientali di Trapani(QAFP II)

Autore/i : L. NIGRO

Anno : 2005

Numero volume : 1-604

Issn : 1824-4017

Isbn : 88-88438-02-9

MACROAREA : E

Margherita Mussi

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Dipartimento : Scienze dell'antichità

Melka Kunture (Ethiopia), an Olduvai-like obsidian sequence

Melka Kunture (Etiopia), la Olduvai di ossidiana

MACROAREA : E

Laura Maria Michetti

SSD : L-ANT/06 - Etruscologia e antichita' italiche

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Dipartimento : Scienze dell'antichità

Historical documents for the Etruscan civilization. Comparative analysis of Greek and Latin literary sources

Documenti storici per la civiltà etrusca. Analisi comparata delle fonti letterarie greche e latine

The main goal of the research is the complete collection of the repertoire of Greek and Latin literary sources on the history of the Etruscans in the volume ¿Fontes ad Res Etruscas Pertinentes¿ (FaREP), which received the 2010 Award of ERMA di Bretschneider and is currently being revised for publication, expected by 2012. The project of drawing up a systematic corpus of ancient sources, selected on the basis of most reliable philological editions, providing for the indexing of words, was conceived in the early ¿50s by M. Pallottino during his teaching at the Sapienza University, with the help of several collaborators, but never accomplished due to the great amount of work. Under the aegis of G. Colonna, since 2006 the project was resumed (coord. L.M. Michetti) with the support of digital media and funded by the

University. PhD students in Archaeology/Etruscology participate in the Working Group. The publication of such a research tool aims to facilitate the work of scholars to find literary sources on the history of the Etruscans and allows both to specialists and students an easy access to these valuable sources. The printed publication will be followed by a CD-Rom edition, to allow easy searching by subject or keywords, indexing through complex and multiple key access.

Altri partecipanti alla ricerca

Elena Tassi		SSD : IUS/18 - Diritto romano e diritti dell'antichita'
Magda Cantù	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Alessandro De Luigi	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Iosetta Corda	Under 40	SSD : IUS/18 - Diritto romano e diritti dell'antichita'
Daniele Maras	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Fontes ad Res Etruscas Pertinentes (FaREP). Repertorio delle fonti letterarie greche e latine per la storia della civiltà etrusca
Autore/i : L.M. MICHETTI - D.F. MARAS - E. TASSI SCANDONE
Nome rivista o titolo libro o atti conferenza : Corollari. Scritti di antichità etrusche e italiche in omaggio all'opera di Giovanni Colonna
Titolo : Un nome per più realtà. Tyrrenìa e Tyrrenoi negli Ethnika di Stefano di Bisanzio
Autore/i : L.M. MICHETTI - D.F. MARAS
Anno : 2011
Nome rivista o titolo libro o atti conferenza : La grande Roma dei Tarquini, Atti del Convegno (Orvieto, 18-20/12/2009), Annali Faina XVII
Titolo : Produzioni artigianali tra Veio e il Lazio nell'età dei Tarquini
Autore/i : L.M. MICHETTI
Anno : 2010
Numero volume : 17
Pagine da - a : 133-158
Isbn : 978-88-7140-445-5

MACROAREA : E

Alessandra Manfredini
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Dipartimento : Scienze dell'antichità

Society, technology, envoronment during Copper Age in Central Italy

Società, tecnologia, ambiente nell'Età del Rame dell'Italia centrale: nuove prospettive di ricerca

This multi-year research aims to analyze the Copper Age groups (5700-4500 Before Present) in central Italy from an ecological and anthropological perspective. The research is based on an interdisciplinary collaboration with specialists of different disciplines and laboratories (Sapienza University, ENEA, CNR, Mibac, Cedad)
The starting point has been the extensive excavation, which lasted a decade, of the large village of Maccarese (Roma). The research provided a unique opportunity, the first in Italy, to widen our knowledge about structural and functional choices: five large huts, pits and other features were found. Preliminary results of research have been published in a monograph (Manfredini A. 2002, Le dune, il lago, il mare. Una comunità di villaggio dell'Età del Rame a Maccarese)). Another important context is the site of Maddalena di Muccia (MC): a large village, later than the previous one, with rectangular huts, complex accessories features (fences, hearths), surrounded by a palisade, suggests the existence of stable communities with a structured social organization.

The excavations are conducted as field school for students of archaeology.
All cartographic and archeological data are recorded into a GIS program, aiming to create an archive of systematic information on the sites.

Altri partecipanti alla ricerca

Cecilia Conati Barbaro	SSD : L-ANT/01 - Preistoria e protostoria
Cristina Lemorini	SSD : L-ANT/01 - Preistoria e protostoria
Alessandra Celant	SSD : BIO/02 - Botanica sistematica
Giovanni Carboni	SSD : L-ANT/01 - Preistoria e protostoria
Carlo Giraudi	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Italo Muntoni	SSD : L-ANT/01 - Preistoria e protostoria
Giuseppe Cilla	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Mara Silvestrini	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Antonio Tagliacozzo	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Antonio Curci	SSD : L-ANT/10 - Metodologie della ricerca archeologica
Loretana Salvadei	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Titolo : Le dune, il lago, il mare: una comunità di villaggio dell¿età del rame a Maccarese
Autore/i : Manfredini A. (a cura di)
Anno : 2002
Nome rivista o titolo libro o atti conferenza : Atti XXXVII Riunione Sc. Ist. It. Preist. Prot
Titolo : L¿abitato di Maddalena di Muccia (Mc).Problemi e prospettive di ricerca
Autore/i : Manfredini A., Silvestrini M., Radi G.,
Anno : 2005
Pagine da - a : 221-230
Nome rivista o titolo libro o atti conferenza : RIVISTA DI SCIENZE PREISTORICHE
Titolo : Adriatico e Tirreno a confronto:analisi dell'occupazione territoriale tra il neolitico finale e l'età del Rame in alcune aree campione dell'Italia centrale.
Autore/i : MANFREDINI A., FUGAZZOLA DELPINI L, SARTI L, SILVESTRINI M, MARTINI F, CONATI BARBARO C, MUNTONI I.M, PIZZIOLO G, VOLANTE N
Anno : 2009
Numero volume : LIX
Pagine da - a : 115-181

MACROAREA : E

Enzo Lippolis

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Dipartimento : Scienze dell'antichità

History of Greek Architecture, from Proto-Geometric Age to Hellenismus

Storia dell'Architettura Greca dal Protogeometrico all'Ellenismo

The project deals in a context free of up to date works in Italian; the object is the critical synthesis of the cultural phenomenon of architecture in the ancient Greek society and in the near Mediterranean communities. The research began in 2005 and involves two main phases: the first, with the final processing of the results (V-XII century BC) was published in 2007, in a volume of about a thousand pages. The second phase (IV-I century BC), instead, is still in progress. As the first one, it will be divided in two sections: the discussion of the phenomenon and of its social and

functional characters; the critical analysis of all the monuments, with a graphic apparatus specifically designed .
The work is a systematic analysis of the topic and the first volume was received with considerable favor in the international scientific world of archaeologists and historians of architecture. The project, in collaboration with the Polytechnic of Bari, fills a major gap. After the history of architecture of W.B. Dinsmoor (1950) it is, in fact, the first systematic work on this subject, on the methods and the problems of interpretation, and can therefore be considered a fundamental point of reference for the development of the specific researches.

Altri partecipanti alla ricerca

Giorgio Rocco SSD : ICAR/18 - Storia dell'architettura
Monica Livadiotti SSD : ICAR/18 - Storia dell'architettura

Partner della ricerca

Politecnico di Bari

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Annuario della Scuola Archeologica Italiana di Atene
Titolo : Lo spazio per votare e altre note di topografia sulle agorai di Atene
Autore/i : LIPPOLIS E.
Anno : 2009
Numero volume : 84, I, 2006
Pagine da - a : 37--62
Issn : 0067-0081
Nome rivista o titolo libro o atti conferenza : Architettura greca. Storia e monumenti del mondo della polis dalle origini al V secolo
Autore/i : E. Lippolis, M. Livadiotti, G. Rocco
Anno : 2007
Numero volume : 1
Isbn : EAN 978-88-424-9220-7
Nome rivista o titolo libro o atti conferenza : Mysteria. Archeologia e culto del santuario di demetra ad Eleusi
Autore/i : E. Lippolis
Anno : 2006
Isbn : EAN 978-88-424-9220-7

MACROAREA : E

Rachele Dubbini

Under 40
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Dipartimento : Scienze dell'antichità

The Agora Cults in the Cities of the Peleponnesus, Corinth in comparison with other Peloponnesian poleis
I culti delle agorai nelle città del Peloponneso. Corinto a confronto con le altre poleis peloponnesiache.

The research is focused on the cults that arose in the agora of ancient Greece of the cities of the Peloponnese from the origins to the Hellenistic age. The aim was to illustrate the religious function of this area as related to specific cults, i.e. Olympian, heroic or chthonic cults. The question is which type of cult was introduced on these agorai and why. The large number of cults and the variety of sacred spaces within an agora could lead to the conclusion that all deities were honoured here. This research discerns the principles behind this seemingly chaotic impression. The agora, as a material expression of political community, preserves the memory of legends and local history. One of the objectives of this work

was furthermore to demonstrate that the religious composition of the agora is complex but nevertheless related to its political functions. The cults of the agora thus stood in direct correlation with the political activities of the place. In this sense, the congregation was no cultic act and the agora no cultic place, but rather a place with cults. Past works preferred the study of the Classical and Hellenistic phases of the agora, this research has as its object the cults of the agorai in relation with the rise and development of urban centers after the Dark Ages.

Partner della ricerca

Istituto di Archeologia Classica dell'Università Ruprecht-Karl di Heidelberg (Germania)

Centro di ricerca ANHIMA (Anthropologie et Histoire des Mondes Antiques), CNRS Parigi.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Memoria. Cultura e costruzione del ricordo nelle società del Mediterraneo e del Vicino Oriente antico. (Scienze dell'Antichità 16)

Titolo : La memoria degli antenati: il "santuario sotterraneo" di Corinto come tritopatreion?

Autore/i : Rachele Dubbini

Anno : 2011

Numero volume : 16

Pagine da - a : 119-136

Nome rivista o titolo libro o atti conferenza : Ritual Dynamics and the Science of Ritual

Titolo : Agones on the Greek Agora between Ritual and Spectacle:

Some Examples from the Peloponnese

Autore/i : Rachele Dubbini

Anno : 2010

Pagine da - a : 157-180

Nome rivista o titolo libro o atti conferenza : Dei nello spazio degli uomini. I culti dell'agora e la costruzione di Corinto arcaica. (Monografie della Rivista «Archeologia Classica», 7)

Autore/i : Rachele Dubbini

Anno : 2011

Pagine da - a : 1-264

Isbn : 978-88-8265-616-4

MACROAREA : E

Luciana Drago

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Dipartimento : Scienze dell'antichità

Southern Etruria and Latium between the Early Iron Age and the Middle Republican Age. Social structure, cults and economy

Etruria meridionale e Lazio tra I età del Ferro ed età medio-repubblicana. Struttura sociale, culti ed economia

The research concerns cultural processes and socio-economic structure in Southern Etruria and Latium between the early Iron Age and the middle Republican age. Before the Euboic and Phoenician colonization in the west and then between the 8th and the 7th century, local communities got different influences from Greek and Levantine people, expecially in metallic and pottery production. The end of the culture of the princess with the beginning of the new urban civilisation signs radical changes in funerary ideology, religion and territorial organisation as well as in the economic system. The study of the coins and ingots of Massalia and Poseidonia togheter with the analysis of the metallic gifts in the sanctuaries of Southern Etruria and Latium indicates that a mixed (etruscan and punic) weight system was used between the VI and the Vth century BC, for the mediterranean market requirements, while in the middle republican age

the influence of the Roman libra became more significant. The results of the studies about socioeconomic development of these periods are illustrated in some articles and contributes to national and international Congresses in press and in the book "Il Lazio dai Colli Albani ai Monti Lepini tra preistoria ed età moderna" a cura di L. Drago Troccoli, Roma 2009.

Altri partecipanti alla ricerca

Alessandro Conti	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Donata Sarracino	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche

Partner della ricerca

Parco Regionale dei Castelli Romani

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Il Lazio dai Colli Albani ai Monti Lepini tra preistoria ed età moderna
Titolo : Il Lazio tra la I età del Ferro e l'orientalizzante. Osservazioni sulla produzione ceramica e metallica tra il II e il IV periodo, l'origine dell'impasto rosso e i rapporti con Greci, Fenici e Sardi
Autore/i : Drago Luciana (a cura di)
Anno : 2009
Pagine da - a : 229-288
Nome rivista o titolo libro o atti conferenza : Cerveteri
Autore/i : Luciana Drago
Anno : 2006
Numero volume : 33
Pagine da - a : 1-158
Nome rivista o titolo libro o atti conferenza : Etruria e Italia preromana. Studi in onore di Giovannangelo Camporeale
Titolo : Veio tra villanoviano e tardo arcaismo. Appunti sulla necropoli di Casale del Fosso
Autore/i : Luciana Drago
Anno : 2009
Numero volume : Studia Erudita 4
Pagine da - a : 327-370

MACROAREA : E

AmaliaMargherita Cirio
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Dipartimento : Scienze dell'antichità

The Nino's Romance

Il Romanzo di Nino

The theory that E. Rhode, analyzing the two main reasons of the literary genre of the novel, the passion of love and the story of travel and adventure, he had entered, as no novel greek then known was held prior to the second century AD, Sophistry in the context of the Second Age was demolished in 1893 after the publication of the novel by Nino papyrus, papyrus as this turned out, from a strict analysis papyrological be written no later than the first century BC, although they contain been clearly the two fundamental characteristics Such, in addition, while not a historical novel, is based on historical characters, unlike the other Greek novels known as Nino and Semiramide cousin.Of large fragments of our knowledge there aims to produce a critical edition with translation and commentary will attempt to reconstruct the plot of the novel to flesh out the themes that will characterize, then, those typical of the novel back and indispensable source for the medieval and modern novels.

Altri partecipanti alla ricerca

Luigi Maria Segoloni SSD : L-FIL-LET/02 - Lingua e letteratura greca

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Rivista di Cultura Classica e Medioevale
Titolo : Postilla all'Epigramma di Damo
Autore/i : AmaliaMargherita Cirio
Anno : 2010
Numero volume : 2
Pagine da - a : 403-6
Issn : 0035-6085
Nome rivista o titolo libro o atti conferenza : Rivista di Cultura Classica e Medioevale
Titolo : L'iconografia di Giulia Balbilla
Autore/i : AmaliaMargherita Cirio
Anno : 2008
Numero volume : 1
Pagine da - a : 184-6
Issn : 0035-6085
Nome rivista o titolo libro o atti conferenza : "ALLE GENTILI ARTI AMMAESTRA"Studi in onore di Alkistis Proiou in Testi e Studi Bizantino-Neoellenici 18
Titolo : Su alcune glosse di Esichio
Autore/i : AmaliaMargherita Cirio
Anno : 2010
Numero volume : 18
Pagine da - a : 33-36
Issn : 0495-2057

MACROAREA : E

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Excavations at Rome, along the north slope of the Palatine Hill and in the Roman Forum

Scavo a Roma lungo le pendici settentrionali del Palatino e nel Foro

This research has begun in 1985 as part of the investigation and enhancement of the archaeological area of Palatino-Roman Forum sponsored by the Soprintendenza ai Beni Speciali di Roma e Ostia. The aim was to reconstruct the development of the landscape at the foot of the Palatine hill, by applying modern methods of stratigraphic excavation in an urban setting for the first time extensively. It has been investigated till today about one hectare of Palatine (from the Arch of Titus to the Forum eastern edge), whose development has been documented through 24 centuries of history, from the first sporadic archaeological evidence (about the twelfth century BC) up to the spoliation of the Lower Middle Ages. The excavation results have changed our understanding of earliest Roman history, because around the mid-eighth century B.C. on this slope the first elements of urban structure and centralized political organization appear: a fortification wall around the Palatine, a royal dwelling (domus Regia), two pubblic sanctuaries (Lares and Vesta), the first house of the Vestal virgins.

Altri partecipanti alla ricerca

Andrea Carandini		SSD : L-ANT/07 - Archeologia classica
Dunia Filippi		SSD : L-ANT/07 - Archeologia classica
Elisa Gusberti	Under 40	SSD : L-ANT/07 - Archeologia classica
Maria Teresa D'Alessio		SSD : L-ANT/07 - Archeologia classica
Nikolaos Arvanitis	Under 40	SSD : L-ANT/07 - Archeologia classica

Brevetti

Procedimento e prodotto informatico per generare una mappa archeologica consultabile tramite navigazione (RM2006A000552).

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Sepolti tra i vivi /Buried among the living. Evidenza ed interpretazione di contesti funerari in abitato, Convegno Internazionale (Roma, 26-29 aprile 2006), Scienze dell¿Antichità
Titolo : Dalla domus Regia al Foro: depositi di fondazione e di obliterazione nella prima età regia
Autore/i : Dunia Filippi
Anno : 2009
Numero volume : 14
Pagine da - a : 617-638
Nome rivista o titolo libro o atti conferenza : Palatium e Sacra via II
Autore/i : Andrea Carandini, Emanuele Papi
Anno : 2006
Numero volume : 59-60
Nome rivista o titolo libro o atti conferenza : Il Santuario di Vesta. La Casa delle vestali e il Tempio di Vesta VIII sec. a.C. ¿ 64 d.C., Quaderni di WAC, 3.
Autore/i : Nikolaos Arvanitis
Anno : 2010

MACROAREA : E

Gilda Bartoloni
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Veii: new perspectives and models for the study of the etruscan city

Veio: nuovi approcci e modelli per lo studio della città etrusca

Since 1996 the "Veii Project" of the University's Great Excavations Program is inspired by a multidisciplinary approach. It involves several University Departments, the Department of Antiquities (MIBAC-SBAEM), the Central Institute for Restoration (ISCR), the National Research Council (CNR) and other Italian and foreign research centers.
Thanks to the most recent researches, focused on the site of Piazza d'Armi -probably the ancient acropolis-, it was possible to define the following aspects: 1) periodization and chronology of the development of the city, from 10th century BC to 10th century AD, with the transformation from aristocratic residence to symbolic space, and finally medieval fortified settlement; 2) the urbanism of the city, that in the mid-seventh century BC -well in advance than previously assumed- is organized with an orthogonal system and subsequently equipped with defensive walls; 3) the organization and function of worship, clarified by the exceptional sacred burial of the founder of the city, by the most ancient temple and by a sacellum with cistern placed near the city walls. The discoveries of recent years, promptly published, have interested the international scientific community stressing the validity of the research methodology and the interest of the site.

Altri partecipanti alla ricerca

Orlando Cerasuolo	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Valeria Acconcia		SSD : L-ANT/06 - Etruscologia e antichita' italiche
Donata Sarracino	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Matteo Milletti	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
JACOPO TABOLLI	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Federica Pitzalis	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Folco Biagi	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Sara Neri	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Alessandra Piergrossi		SSD : L-ANT/06 - Etruscologia e antichita' italiche
Elisa Biancifiore	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Silvia Ten Kortenaar	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Iefke van Kampen	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche
Luca Pulcinelli	Under 40	SSD : L-ANT/06 - Etruscologia e antichita' italiche

Partner della ricerca

Comune di Formello (RM)

Università del Salento - Dipartimento di Ingegneria dell'Innovazione (analisi radiocarboniche)

Ministero per i Beni e le Attività Culturali - Soprintendenza per i Beni Archeologici dell'Etruria Meridionale

Parco Naturale Regionale di Veio

University of Copenhagen - SAXO-Institute - Archaeology, Ethnology, Greek & Latin, History (Prof.ssa A. Rathje)

Ministero per i Beni e le Attività Culturali - Istituto Superiore per la Conservazione ed il Restauro

Consiglio Nazionale delle Ricerche - Istituto di Studi sulle civiltà italiche e del Mediterraneo antico (CNR-ISCIMA)

Consiglio Nazionale delle Ricerche - Istituto per le Tecnologie Applicate ai Beni Culturali (CNR-ITABC)

Ministero per i Beni e le Attività Culturali - Soprintendenza al Museo Nazionale Preistorico Etnografico "L. Pigorini" - Sezione Antropologica (dott.ssa. L. Salvadei)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Etruscan News

Titolo : Veio: il cane di terracotta

Autore/i : G.Bartoloni

Anno : 2011

Numero volume : 10

Nome rivista o titolo libro o atti conferenza : L'abitato di Veio I. Cisterne, pozzi e fosse

Autore/i : G.Bartoloni (a cura di)

Anno : 2009

Isbn : 8890371110

Nome rivista o titolo libro o atti conferenza : Tetti di terracotta, Officine Etruscologia 5, 2011

Titolo : Veio, Piazza d'Armi: riconsiderazioni e novità.

Autore/i : G.Bartoloni, V.Acconcia, A.Piergrossi, S. ten Kortenaar, I. van Kampen

Anno : 2011

Numero volume : 5

Pagine da - a : 1-55

Isbn : 9788850490819

MACROAREA : E

BARBARA BARICH
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Dipartimento : Scienze dell'antichità

NOMADS AND SETTLERS IN THE LATE PREHISTORY OF THE LIBYAN-EGYPTIAN SAHARA: Italian Archaeological Mission in Egypt and Libya

NOMADI E SEDENTARI NELLA TARDA PREISTORIA DEL SAHARA LIBICO-EGIZIANO: Missioni archeologiche in Egitto e Libia

The central theme of this multidisciplinary research are the phenomena of social transformation that arise in the late Holocene in both Egypt and Libya (ca 5000 a.C.). In particular, we investigated the transition from a mixed economic model towards a highly mobile pastoral society, which was responsible for the configuration of the North African proto-history. The shepherds established the exchange network that started since pre- and proto-Dynastic times arriving, on the one hand, to the Nile Valley and on the other reaching the North African coast. These exchanges are documented by surface finds (e.g. hut foundations, cooking areas, hearths etc.), which are common in the regions of the Maghreb and the Sahara, by exotic raw materials, by stylistic elements of the material culture and by rock art works. Through these contacts, the spread from east to west of the primary domesticated resources (barley and wheat, goat and sheep), was intensified throughout the North African area. The aim of the research was therefore to investigate the origins of the nomadic North African phenomenon examined within significant geographical contexts in Egypt and Libya, its close ties with the climatic changes and the dynamics of interaction between shepherds and agriculturalist

Altri partecipanti alla ricerca

CARLO GIRAUDI		SSD : GEO/02 - Geologia stratigrafica e sedimentologica
ELENA A. GARCEA		SSD : L-ANT/01 - Preistoria e protostoria
GIULIO LUCARINI	Under 40	SSD : L-ANT/01 - Preistoria e protostoria
GIUSEPPINA MUTRI	Under 40	SSD : L-ANT/01 - Preistoria e protostoria
ILARIA VENIR	Under 40	SSD : L-ANT/01 - Preistoria e protostoria
ULISSE FABIANI	Under 40	SSD : ICAR/06 - Topografia e cartografia
MOHAMED A. HAMDAN		SSD : GEO/02 - Geologia stratigrafica e sedimentologica
AGMED G. FAHMI		SSD : BIO/03 - Botanica ambientale e applicata
LUIGIA MANFRA		SSD : GEO/08 - Geochimica e vulcanologia
CHIARA ROZERA	Under 40	SSD : L-ANT/01 - Preistoria e protostoria
MARIA SOFIA SCARAMUZZA	Under 40	SSD : L-ANT/01 - Preistoria e protostoria
MATTIA CRESPI		SSD : ICAR/06 - Topografia e cartografia
GIULIA D'ERCOLE	Under 40	SSD : L-ANT/01 - Preistoria e protostoria

Partner della ricerca

SUPREME COUNCIL OF THE EGYPTIAN ANTIQUITIES (SCA), CAIRO, EGYPT;
DEPARTMENT OF ANTIQUITIES (DOA, TRIPOLI, LIBYA;
UNIVERSITY OF HELWAN, EGYPT
LòABORATOIRE DE PREHISTOIRE ET TECHNOLOGIE -PARIS NANTERRE
CAIRO UNIVERSITY - GIZA, CAIRO, EGYPT

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : EGYPT AT ITS ORIGINS
Titolo : The Nile Valley seen from the Oases. The contribution from Farafra
Autore/i : B.E.BARICH, G.LUCARINI

Nome rivista o titolo libro o atti conferenza : EGYPT AT ITS ORIGINS
Anno : 2008
Numero volume : Orientalia Lovaniensia Analecta 172
Pagine da - a : 567-592
Issn : ---
Isbn : 978-90-429-1994-5
Doi : ----
Nome rivista o titolo libro o atti conferenza : AFRICAN ARCHAEOLOGICAL REVIEW
Titolo : Ecological Patterns in the Upper Pleistocene and Holocene in the Jebel Gharbi, Northern Libya:Chronology, Climate and Human Occupation
Autore/i : B.E.BARICH, E.A.GARCEA
Anno : 2008
Numero volume : 25
Pagine da - a : 67-97
Issn : --
Isbn : --
Doi : 10.1007/s10437-008-9020-6
Nome rivista o titolo libro o atti conferenza : MAN-MILLENNIA-ENVIRONMENT
Titolo : Living in the Oasis. Beginning of village life at Farafra and in the Western Desert of Egypt.
Autore/i : B.E.BARICH
Anno : 2008
Numero volume : --
Pagine da - a : 145-150
Issn : ---
Isbn : 978-83-89499-42-4
Doi : ---

MACROAREA : E

GIORGIO INGLESE
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Dipartimento : Scienze documentarie, linguistico-filologiche e geografiche

The Making of Dante's Commedia "antiqua vulgata"

La formazione dell'antica vulgata della Commedia dantesca

The objective of the research is the revision of the text of Dante's "Commedia" on the basis of methodologically up-to-date tools. The first phase of the work sought to establish a genealogy hypothesis of the earliest manuscript records. For this purpose, approximately two hundred passages (containing substantial errors) belonging to fourteen selected manuscripts were collated anew; the results of the collation were then interpreted through an innovative methodology, which combines the qualitative and quantitative analysis of the concordant errors. Subsequently, the currently available critical text (ed. by Giorgio Petrocchi, 1966-67) became object of re-evaluation. The new version of the first canticle was published in 2007; the new version of the second canticle is awaiting publication. As far as the substantial variances are concerned, the lesson results from the comparative examination of the four main ancient traditions of the poem (sigla: a, b, c, beta. With regard to the formal variances (accidentals), they have been stated in accordance to the 1080 Trivultian Florentine manuscript. The textual restoration involved the complete linguistic and literary analysis of the canticles, whose comment is to be found in the footnote.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Filologia Italiana

Titolo : Per lo 'stemma' della Commedia dantesca. Tentativo di statistica degli errori significativi

Autore/i : Giorgio Inglese

Anno : 2007

Numero volume : 4

Pagine da - a : 51-72

Issn : 1724-6113

Nome rivista o titolo libro o atti conferenza : Dante Alighieri, Commedia, revisione del testo e commento di Giorgio Inglese, Inferno

Autore/i : Giorgio Inglese

Anno : 2007

Numero volume : 1

Pagine da - a : 1-410

Isbn : 9788843042845

MACROAREA : E

Nisini Giorgio

Under 40

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Dipartimento : Scienze documentarie, linguistico-filologiche e geografiche

First narrative literature by Pier Paolo Pasolini

La narrativa giovanile di Pier Paolo Pasolini

From the half of the '40's up to the publication of his first novel (Ragazzi di vita, 1955), Pier Paolo Pasolini worked to a large number of fiction projects, experimenting contemporary diary-form, short story, cosmogonic work and the auto-biographic social novel. Most of this production, except some juvenile tales as well as Sogno di una cosa, was published only after the writer's death. As a result this production has not yet been thoroughly analyzed by critics. This research intends to contribute to solve this lacking in interpretation focusing on the whole first narrative literature by Pasolini up to the long and complex composition of Ragazzi di vita.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : L'unità impossibile. Dinamiche testuali nella narrativa di Pier Paolo Pasolini

Autore/i : Giorgio Nisini

Anno : 2008

Isbn : 978-88-430-4705-5

Nome rivista o titolo libro o atti conferenza : Il romanzo di formazione nell'Ottocento e nel Novecento

Titolo : Da Luciano al Riccetto. Storie di un romanzo senza formazione

Autore/i : Giorgio Nisini

Anno : 2007

Pagine da - a : 433-440

Isbn : 978-884671796-2

Nome rivista o titolo libro o atti conferenza : Il Verri

Titolo : Racconti, anti-racconti, romanzi fallimentari. Riflessioni sulla forma breve nella narrativa di Pier Paolo Pasolini

Autore/i : Giorgio Nisini

Anno : 2006

Nome rivista o titolo libro o atti conferenza : L'unità impossibile. Dinamiche testuali nella narrativa di Pier Paolo Pasolini
Numero volume : 30
Pagine da - a : 94-105
Issn : 0506-7715

MACROAREA : E

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Mediterranean Enlightenment. Corsica and democracy in the season of revolutions

Il Mediterraneo dei Lumi. Corsica e democrazia nella stagione delle rivoluzioni

Corsica, for centuries under the rule of Genoa, has undergone one of the most important revolutionary movements of the 18th century, with the Government of Pasquale Paoli has become the model for subsequent Republican experience of Europe and was the focus of the discussions of the major philosophers and intellectuals of the age of Enlightenment: Rousseau, Goethe, Boars, Voltaire, Alfieri, Boswell, Symonds, Robespierre, Buonarroti. This work chose a read through the events, both of a long-term history and of a short-term history of the Island, trying to understand the sources and trends of the revolution but also the popular identity, social expectations, economic, cultutal and anthropological of a land constantly restricted to its horizons by presences unconfortable, from powerful neighbors and, in the nearest time, by states often at war.

The research tried to highlight not only the elements of novelty of Pauline Constitutions (1755) over the European philosophy of Law, but also its intrinsic limitations, derived from the "stability pact" conceived and promoted by Paoli to meet struggles between clans in the South, notables of Upper Corsica and the French power in the Eighteenth Century.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Frontiere In(di)visibili. I moriscos tra la Spagna e il Mediterraneo nel XVI e XVII secolo.
Autore/i : DAL PASSO F., RANDOLFI SARA (2011).
Anno : 2011
Numero volume : 1
Pagine da - a : 1-170
Isbn : 978-88-548-3829-8
Nome rivista o titolo libro o atti conferenza : SEMESTRALE DI STUDI E RICERCHE DI GEOGRAFIA
Titolo : Storia e diritti delle minoranze.
Autore/i : Fabrizio Dal Passo
Anno : 2005
Pagine da - a : 1-100
Issn : 1125-5218
Nome rivista o titolo libro o atti conferenza : Il Mediterraneo dei Lumi. Corsica e democrazia nella stagione delle rivoluzioni.
Autore/i : Fabrizio DAL PASSO
Numero volume : 1
Pagine da - a : 1-532
Isbn : 8870885267

MACROAREA : E

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Dipartimento : Scienze documentarie, linguistico-filologiche e geografiche

Federico Cesi's private library

La biblioteca di Federico Cesi

Federico Cesi (1585-1630) was an important scientist in the XVIIth century, in particular involved in Botany, and in 1603 he founded the Accademia dei Lincei, to which also Galileo Galilei was enrolled in 1611.
The purpose of this research was the reconstruction of the extraordinary book collection (about 3.000 items) created by Cesi during thirty years of intense activity, containing significant works in the fields of Medecine, Alchemy, Astronomy, Natural Sciences, Secreta, and considered one of the most significative scientific book collection in the XVIIth century.
The reconstruction of the private library, which served also as library of the Accademia dei Lincei until 1630, has been based on the transcription and the analysis of two manuscript inventories owned by the library of the Accademia dei Lincei, containing rough descriptions of the works and editions.
During four years, the authors and the roughly described works and editions have been identified, also using documents of Cesi Family archive keeped in the Rome Archivio di Stato, and the cultural and scientific fields existing in the collection have been outlined.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : La biblioteca di Federico Cesi
Autore/i : Maria Teresa Biagetti
Anno : 2008
Numero volume : 1
Pagine da - a : 529 p.
Isbn : 978-88-7870-342-1

MACROAREA : E

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Dipartimento : Storia, culture e religioni

"Lacerated Italy". Girolamo Borgia in the historical culture of the Renaissance

"Italia dilacerata". Girolamo Borgia nella cultura storica del Rinascimento

«Lacerated Italy», thanks to in-depth archival research, offers the first intellectual biography of the Neapolitan humanist Girolamo Borgia (1479-1550) in its various political, cultural, and religious aspects, providing a new contribution to Italian Renaissance historiography and its political implications.
The monograph focuses on an analysis of Borgia?s Historiae de bellis italicis, a source still unpublished despite its importance to the understanding of the Italian crisis in the first half of the sixteenth century and its causes and consequences. Borgia went beyond the traditional reading and inserted the history of the peninsula into a broader and more complex European context, insisting that Italy, at the beginning of the sixteenth century, found itself at the center of the battle for European supremacy. In the face of Spanish domination in Italy, Borgia believed that the pope could play a central role in the political system of the Italian states, provided that a process of moral and religious renewal of the Church of Rome began. «Lacerated Italy» shows how, despite the divisions and the inability of the ruling classes of the peninsula to defend their autonomy, at the time there was no shortage of resistance and opposition, nor of attempts at political reform.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : «Quellen und Forschungen aus italienischen Archiven und Bibliotheken (QFIAB)»,

Titolo : «Né Chietino mi sento, né luterano». Storiografia e cultura erasmiana durante il pontificato di Paolo III,

Autore/i : Elena Valeri

Anno : 2009

Numero volume : 89

Pagine da - a : 241-262

Nome rivista o titolo libro o atti conferenza : "Roma y España: un crisol de la cultura europea en la edad moderna", Actas del Congreso Internacional celebrado en la Real Academia de España en Roma, coordinador Carlos José Hernando Sánchez

Titolo : "España las armas y Italia la pluma". La vita di Consalvo di Cordova di Paolo Giovio (1526-1549)

Autore/i : Elena Valeri

Anno : 2007

Numero volume : 1

Pagine da - a : 323-334

Nome rivista o titolo libro o atti conferenza : L'Italia dell'inquisitore. Storia e geografia dell'Italia del Cinquecento nella Descrittione di Leandro Alberti, a cura di Massimo Donattini,

Titolo : La «libertà d'Italia» nelle Historiae di Girolamo Borgia (1494-1547)

Autore/i : Elena Valeri

Anno : 2007

Pagine da - a : 219-230

MACROAREA : E

Carla Maria Rita

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Dipartimento : Storia, culture e religioni

Migrations and migrants: old and new fields

Migrazioni e migranti: vecchi e nuovi territori

The research deals with the relevant subject of migration anthropology.

The interpretative complexity of the migratory phenomenon allows to say that migrations have become significant with regard to demography, political, economical and social aspects, but also as the whole of various complexities such as the identity policies and the change of status and social conditions.

Of remarkable interest is the Uruguayan situation. Since the beginning of its history a territory of immigration, Uruguay has demonstrated a main capacity to offer hospitality, based on a tradition of a laic, egalitarian and democratic State, with its potential to integrate all the various components (such as gauchos, women, native communities still remaining, afro communities, religious minorities, immigrants communities, etc.). All these social components have not been obliged to renounce their own differences, but bounded them in a private sphere, putting on public only the attitudes that were able to get a generalised inter-communication.

In this double cross of inclusion and exclusion, the national identity has been built. The pattern of modern nationality is based on the fundamental concept to drop the previous identities versus a political and social integration. Evolved between the XIX and the XX centuries, this pattern of homogenizing integration is still alive and it is basic for the construction of a strong national identity, a meaning of being Uruguayan in which is possible to recognize themselves.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Un Paese che cambia. Saggi antropologici sull'Uruguay tra memoria e attualità

Autore/i : Carla Maria RITA (a cura di)

Anno : 2010

Isbn : 978-88-7975-481-1

Nome rivista o titolo libro o atti conferenza : Anuario Antropologia Social y Cultural en Uruguay

Titolo : Luoghi per ricordare: la memoria della tragedia a Montevideo

Autore/i : Carla Maria Rita, Lorenzo D'Orsi

Anno : 2010

Pagine da - a : 67-79

Issn : 1510-3846

Nome rivista o titolo libro o atti conferenza : Un Paese che cambia. Saggi antropologici sull'Uruguay tra memoria e attualità

Titolo : Un Paese che cambia

Autore/i : Carla Maria Rita

Anno : 2010

Pagine da - a : 29-51

Isbn : 978-88-7975-481-1

MACROAREA : E

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Dipartimento : Storia, culture e religioni

History, knowledge and domestic slavery in Akan area in Ghana

Storia, saperi e schiavitù domestica in area Akan in Ghana

The research aimed at exploring historical, environmental and ethnoscientific knowledge among the Nzema people of Ghana. Within this wider scope, a specific aim of the research was to reconstruct the memory of domestic slavery and its implications in the modern structure of the Nzema society. In particular, the last four years of fieldwork were devoted to the exploration of the memories concerning the custom labelled as "marriage in the house" that encompasses two different types of marriage exchange: the cross-cousin marriage, and the marriage with a slave or pawned woman. This exploration, carried out in the whole Nzema area, as well as in other areas of the wider Akan territory (Ghana and Ivory Coast), allowed the historical reconstruction of many lineages and stool families, throwing new light on the process of peopling of the area in the past centuries. It allowed as well a new and more accurate reconstruction of the kinship systems of the Akan area, and particularly a new criticism of the famous Wilks' "big bang" theory of Akan history. A particular output of the research is the creation of the "Fort Apollonia Museum of the Nzema Culture and History" (see http://www.musei.uniroma1.it/apollonia/index.html) in the building of a British fort used for the slave trade.

Partner della ricerca

Institute of African Studies, University of Ghana, Legon

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Chiefs and Development in Ghana.

Autore/i : Arhin Brempong and Mariano Pavanello

Nome rivista o titolo libro o atti conferenza : Chiefs and Development in Ghana.
Anno : 2006
Pagine da - a : 1-76
Isbn : 9988¿8300¿4¿1
Nome rivista o titolo libro o atti conferenza : Il segreto degli antenati
Autore/i : Mariano Pavanello
Anno : 2007
Pagine da - a : 1-288
Isbn : 978-88-95458-00-7
Nome rivista o titolo libro o atti conferenza : Ghana Studies
Titolo : Reconsidering Ivor Wilks¿ « big bang » theory of Akan history.
Autore/i : Mariano Pavanello
Anno : 2010
Numero volume : 12-13
Pagine da - a : 7-31
Issn : 1536-5514

MACROAREA : E

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Dipartimento : Storia, culture e religioni

Celtic Lore and Germanic Literature. A Comparison between Cultures

Celtico e germanico. Due culture a confronto

This research focussed on historical and literary contacts between Vikings and Gaels in the British Isles before 1014 and on the settlement of Gaels in Iceland, firstly as anchorite monks, later as slaves or retainers of Viking pagans and Norse settlers. Nevertheless, written evidence would suggest that Irish slaves were given Norse names and probably were not allowed to use their language, but obliged to learn Old Norse. This hypothesis could explain the lack of Gaelic names and loanwords in Icelandic, even if Iceland toponymy still preserves evidence of an early Irish settlement. From cultural contacts and exchanges between Norse and Irish people, already converted to Christianity, many motifs of the Gaelic lore came to Iceland. Our research attempted to recognize Irish features in Icelandic lays and sagas, investigating the impact of Celtic tales and the influence of Irish Christianity on Icelandic literature. This analysis resulted in several articles examining mythological similarities between Irish Mabinogi and Old Norse Poetic Edda, which can be traced back to Celtic traditions. Finally, the importance of Christianity in the development of Saga-writing has been stressed in a book devoted to the Icelandic literature from the medieval Golden Age to the Baroque era.

Altri partecipanti alla ricerca

Tommaso Marani	Under 40	SSD : L-FIL-LET/15 - Filologia germanica

Partner della ricerca

Centre Medieval Studies. Durham University

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : La letteratura cristiana in Islanda, a cura di C. Del Zotto
Titolo : La letteratura cristiana nell'Islanda medievale
Autore/i : C. Del Zotto
Anno : 2010

Nome rivista o titolo libro o atti conferenza : La letteratura cristiana in Islanda, a cura di C. Del Zotto
Numero volume : Neg/Otia nostra 3
Pagine da - a : 13-53
Isbn : 978 88 430 5469 5
Nome rivista o titolo libro o atti conferenza : Rivista di cultura classica e medioevale
Titolo : Echi celtici nei canti dell'Edda
Autore/i : Carla Del Zotto
Anno : 2009
Numero volume : 51/2
Pagine da - a : 457-466
Issn : 0035 6085
Nome rivista o titolo libro o atti conferenza : Studi e Materiali di Storia delle Religioni
Titolo : Maleficia vel litterae solutoriae. Il valore magico delle rune
Autore/i : Carla Del Zotto
Anno : 2010
Numero volume : 76/1
Pagine da - a : 151-186
Isbn : 978 88 372 2424 0

MACROAREA : E

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Dipartimento : Storia, culture e religioni

Religious syncretism in Latin America and the Caribbean. Resistence to evangelization and elaboration of new religious forms in the colonial and neocolonial context

Il sincretismo religioso in America Latina e nel Caribe. Resistenza all'evangelizzazione ed elaborazione di nuove forme di religiosità nel contesto coloniale e neocoloniale

The proposed research will unfold along two threads of enquiry. The first, theoretical dimension concerns the reflection on the concept of syncretism and the categories it encompasses (transculturation, hybridity). The second dimension aims to investigate specific forms of syncretism, and the process through which it emerges in particular contexts in Latin America and the Caribbean.

The development of this region has been characterized by "ethnic hurricanes", moments of intense ethnic re-composition through which different social and cultural forms of life merged to produce a pluralist and profoundly contradictory society. In particular, the process of evangelization beginning with the conquest engendered dialectical dynamics implying both acceptance and rejection of Christianity. Not only such dynamics are part of the past historical development of the region, but they also characterize its contemporary social texture, which has been increasingly traversed by patterns of pluralism and conflictuality since the '80s and the diffusion of (the) new religious movements. The two dimensions of the research are strictly interrelated, insofar as the fieldwork is meant to provide useful elements to test and rethink the categories of analysis underpinning the project.

Altri partecipanti alla ricerca

Elena Zapponi	Under 40	SSD : M-DEA/01 - Discipline demoetnoantropologiche

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Caminhos
Titolo : Sincretismo y sincretizacion. Dos ejemplos cubanos

Nome rivista o titolo libro o atti conferenza : Caminhos
Autore/i : CIATTINI A.
Anno : 2010
Numero volume : 8
Pagine da - a : 113-131
Issn : 1883-778X
Nome rivista o titolo libro o atti conferenza : Asché. Viaggio nei riti religiosi afrocubani
Titolo : Le religioni afrocubane. Una sfida alla precarietà
Autore/i : CIATTINI A.
Anno : 2011
Pagine da - a : 9-58
Isbn : 978-8889797-273
Nome rivista o titolo libro o atti conferenza : Aperture
Titolo : Pensiero concreto e religiosità popolare
Autore/i : CIATTINI A.
Anno : 2009
Numero volume : 24/25
Pagine da - a : 84-101
Issn : 2037-2558

MACROAREA : E

Andrea Carteny
Under 40
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Dipartimento : Storia, culture e religioni

Prin 2007: "Europe and Asia between history and geopolitics" (Compared Nationalisms in Eastern and Western Europe)

Prin 2007: "L'Europa e l'Asia tra storia e geopolitica" (Nazionalismi comparati in Europa orientale e occidentale)

Between Western and Eastern nationalisms (civic the first, ethnic the second one, as in the Kohn paradigm) there is a perspective of Europe's historical cases. In Europe, a new dimension of claim (e.g. the "European federation") look at a higher "European sovereignty" to build a peaceful continental framework. In several national questions, Nations and nationalities claim "historical rights" and "sovereignty" to develop peripheral nationalism forms.
In Spain, the Basque nationalism began ethnocentric, based on the claim of the old "fueros" and on the purity of Basques. The claiming of auto determination (as the last "soberanist" Ibarretxe Plan) gave to leftist nationalists the possibility to draw a larger Basque Nation, done by the use of euskera language.
The Eastern sample is Transylvania, a multinational region with a traditional autonomy. Hungarians and Germans minorities were included in a "greater" Romania at the end of the WW1, and a regional soul (defined by culture and territory) stands out among Transylvanians. An ethnic definition of Nation survived, as in the Transylvanian Hungarian Szeklers, based on the old privileges (in force in the XV-XIX centuries).
Today, in the public debate, sovereignty and historical rights are keywords to compare peripheral nationalisms.

Partner della ricerca

Institute of Italo-Romanian Studies (Babes-Bolyai University of Cluj, Petru Maior University of Targu Mures, Romania)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Il micro-nazionalismo e l'Europa.?

Contributi sulla sovranità europea e sulle questioni politiche e culturali delle minoranze nazionali (Paesi Baschi, Transilvania)

Autore/i : A. Carteny

Anno : 2010

Pagine da - a : 1-125

Isbn : 9788861343894

Nome rivista o titolo libro o atti conferenza : "I partiti politici in Romania (1989-2004)"

Autore/i : A. Carteny

Anno : 2007

Pagine da - a : 1-140

Isbn : 88-87080-550

Nome rivista o titolo libro o atti conferenza : "Transylvanian Review", Autumn 2007, nr 3

Titolo : The Defence of the Periphery in Western and Eastern Europe. The cases of the Basques in Spain and of the Hungarians in Romania

Autore/i : A. Carteny

Anno : 2007

Numero volume : XVI

Pagine da - a : 121-129

Issn : 1221-1249

MACROAREA : E

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Dipartimento : Storia dell'arte e spettacolo - Arti visive, digitali, teatro, cinema, danza, patrimoni culturali

Routes of distribution of Byzantine art in the Mediterranean: a corpus of the Constantinopolitan bronze doors in Italy (11th-12th centuries)

Vie e modalità di diffusione dell'arte e della tecnologia bizantina nel Mediterraneo: per un corpus delle porte bronzee costantinopolitane in Italia (XI-XII secolo)

The Byzantine bronze doors in Italy are an extraordinary evidence of the medieval artistic culture, and remain the sole surviving example of a specific kind of metalwork in Constantinople, since no other similar piece is preserved in the lands of the Empire.

These exquisite inlaid doors can be considered as an outstanding proof of the great success of Byzantine art in Romanesque world; furthermore, they provide important information to understand the commercial and artistic network in which the Italian maritime Republics played a fundamental role.

"Le porte del Paradiso" (2009) is the result of intense studies devoted to these pieces and to their original context. In the framework of a two-year PRIN research coordinated by Prof. A. Iacobini from Sapienza, scholars from different European countries focused their attention on history, historiography, style and technique of these artifacts. The book provides a modern and updated contribution on the eight Byzantine doors in Italy, from different viewpoints: their previous models, their historical and religious importance, their relations with the churches to which they belonged, their technique and restauration. The chronological and geographical range goes from the age of Justinian to the orthodox Russia.

Altri partecipanti alla ricerca

Andrea Paribeni		SSD : L-ART/01 - Storia dell'arte medievale
Mauro Della Valle		SSD : L-ART/01 - Storia dell'arte medievale
Simona Moretti	Under 40	SSD : L-ART/01 - Storia dell'arte medievale
Cristina Pantanella		SSD : L-ART/04 - Museologia e critica artistica e del restauro

Partner della ricerca

Istituto Svizzero di Roma

Comitato nazionale per le celebrazioni del millenario dell'abbazia greca di S. Nilo a Grottaferrata

Regione Lazio - Assessorato alla Cultura

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Medioevo mediterraneo: l'Occidente, Bisanzio e l'Islam dal tardoantico al secolo XII, Atti del Convegno internazionale - Parma, 21-25 settembre 2004

Titolo : Arte e tecnologia bizantina nel Mediterraneo: le porte bronzee dell'XI-XII secolo.

Autore/i : Antonio Iacobini

Anno : 2007

Pagine da - a : 22-36

Isbn : 978-88-370-5655-1

Nome rivista o titolo libro o atti conferenza : Medioevo: le officine, Atti del Convegno Internazionale - Parma, 22-27 settembre 2009

Titolo : «Barisanus me fecit»: nuovi documenti sull'officina di Barisano da Trani.

Autore/i : Antonio Iacobini

Anno : 2010

Pagine da - a : 190-206

Issn : 978-88-370-7848-5

Isbn : 978-88-370-7848-5

Nome rivista o titolo libro o atti conferenza : Le porte del Paradiso. Arte e tecnologia bizantina tra Italia e Mediterraneo.

Autore/i : Antonio Iacobini

Anno : 2009

Pagine da - a : 1-600

Isbn : 978-88-88168-43-2

MACROAREA : E

Barbara Staniscia

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Dipartimento : Studi europei, americani e interculturali

Preserving places. Managing mass tourism, urban conservation and quality of life in historic centres. Acronym: PLACE

Tutelare i luoghi. Gestione del turismo di massa, conservazione urbana, qualità della vita nei centri storici. Acronimo: PLACE

The Project has investigated policies of urban conservation and the impact of tourism in historic centres through various case studies identified by each partner/country, in order to define critical points for a sustainable development. Its aim has been to investigate: i) the impact of tourism on the monumental and symbolic cores of historic cities, ii) how town planning and conservation policies have changed in the last years in order to accommodate increasing tourist pressure. The final purpose has been to contribute to identify the requirements for the development and implementation of a

sustainable model for historic city centres able to consider and bring together the strong economic interests linked to tourism with the need to preserve the cultural heritage and safeguard urban local identity. The planned objectives were not easy to be achieved; it is not by accident that the literature mostly deals with this issue in a fragmented way (examining either aspects of tourism or of conservation or of urban quality). PLACE has responded to this challenging aim by introducing an interdisciplinary team and a quantitative/qualitative methodological approach to quantify impacts and identify critical points, thus fostering sustainable valorisation policies.

Altri partecipanti alla ricerca

Alfredo Cocci	SSD : M-STO/01 - Storia medievale
Claudio Zambianchi	SSD : L-ART/03 - Storia dell'arte contemporanea

Partner della ricerca

Consiglio Nazionale delle Ricerche - Istituto per la Conservazione e la Valorizzazione dei Beni Culturali, Sezione di Roma - CNR-ICVBC
Universidad Autonoma de Madrid, UAM - ES
Universite Libre de Bruxelles, ULB - BE
Etudes Superieures d¿Hotellerie et de Tourisme de l¿Universitee d¿Angers, ESTHUA - FR
Aristotle University of Thessaloniki, School of Architecture, AUTH - GR
Middle East Technical University, Department of Architecture, METU - TR
London Metropolitan University, LMU - GB

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : RIVISTA DI SCIENZE DEL TURISMO
Titolo : Urban tourism in the context of the global economic crisis: the example of the city of Rome
Autore/i : MONTANARI A.
Anno : 2010
Numero volume : I (2)
Pagine da - a : 381-399
Issn : 2037-7916
Nome rivista o titolo libro o atti conferenza : RIVISTA DI SCIENZE DEL TURISMO
Titolo : Rome: a difficult path between tourist pressure and sustainable development
Autore/i : MONTANARI A and STANISCIA B.
Anno : 2010
Numero volume : I (2)
Pagine da - a : 301--316
Issn : 2037-7916
Nome rivista o titolo libro o atti conferenza : RIVISTA DI SCIENZE DEL TURISMO
Titolo : Special issue on Preserving places, managing mass tourism, urban conservation and quality of life in historic centres
Autore/i : MONTANARI A. (guest editor)
Anno : 2010
Numero volume : I (2)
Pagine da - a : 1-399
Issn : 2037-7916

MACROAREA : E

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Dipartimento : Studi europei, americani e interculturali

SECOA FP7 European Project

SOLVING ENVIRONMENTAL CONFLICTS IN COASTAL AREAS

Global Change, human mobility and sustainable urban development

La soluzione dei conflitti ambientali nelle aree costiere (SECOA)

SECOA FP7 European Project
SOLVING ENVIRONMENTAL CONFLICTS IN COASTAL AREAS
Global Change, human mobility and sustainable urban development
http://www.projectsecoa.eu/

The project considers the effects of human mobility on urban settlement growth and restructuring in coastal areas where (i) environment is more fragile and space limited, (ii) every phenomenon is more concentrated and (iii) effects on natural and cultural environment are more acute. Problems are multiplied since the climate change affecting environmental parameters - as sea levels - augments risks of flooding, propagation of pollutants, dislocation of a great number of settlers. SECOA has the following tasks: (i) identify conflicts, (ii) analyze their quantitative and qualitative effects on the environment, (iii) create models to synthesize the complexity of the different social, economic and environmental systems, (iv) compare the priority of each typology through taxonomy. Outcomes include (i) elaboration of an analysis methodology, (ii) creating tools for appropriate policies, (iii) scenario building, (iv) dissemination¿exploitation of results for users¿ needs. The project concerns eight metropolitan areas of global importance and eight ones of local importance in European and Asian countries.

Altri partecipanti alla ricerca

Enrico Rolle	SSD : ICAR/03 - Ingegneria sanitaria - ambientale
Marco Ramazzotti	SSD : L-OR/05 - Archeologia e storia dell'arte del vicino oriente antico
Piero Bellotti	SSD : GEO/02 - Geologia stratigrafica e sedimentologica
Rossana Raffi	SSD : GEO/04 - Geografia fisica e geomorfologia
Silvio Evangelista	SSD : GEO/04 - Geografia fisica e geomorfologia
Lina Davoli	SSD : GEO/04 - Geografia fisica e geomorfologia
Giorgio Alleva	SSD : SECS-S/01 - Statistica
Vincenzo Naso	SSD : ING-IND/09 - Sistemi per l'energia e l'ambiente
Barbara Staniscia	SSD : M-GGR/01 - Geografia
Roberto Antonelli	SSD : L-FIL-LET/09 - Filologia e linguistica romanza
Elvidio Lupia Palmieri	SSD : GEO/04 - Geografia fisica e geomorfologia
Mario Beccari	SSD : ING-IND/25 - Impianti chimici

Partner della ricerca

University of Brussels (VUB), University of Lisbon, University of Goteborg, Metropolitan University of London, University of Jerusalem, University of Pune, Institute of Marine Environment and Resources

MACROAREA : E

maria domenica Combi
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Dipartimento : Studi europei, americani e interculturali

TIGER - Territorial Impact of Globalization for Europe and its Regions

impatto territoriale della globalizzazione per l'Europa e le sue regioni

Globalisation is accelerating with European competitiveness becoming more and more interwoven and dependent on the rest on the world. Understanding Europe in the world is a prerequisite for policy making and for promoting Europe in this international competition.

Integration, cooperation and smart exploitation of resources are key factors for improving the competitiveness of European regions in the globalised world scene. It is also important to better understand the territorial structures and patterns of economic activity at world level, as well as flows between continents and throughout European regions. Regions are under strong impact on many trends and developments related to globalisation and need support to decide on potential strategic investments that could increase their competitiveness in this globalized world.

TIGER looks at globalisation from a territorial perspective and analyses its territorial aspects and its dynamics at different geographical scales. It also addresses the importance of territorial cooperation and flows linking EU territory. The main aim of the project is to look into the territorial dimension of the globalisation process and analyse its significance for an enlarged Europe.

Altri partecipanti alla ricerca

barbara staniscia	SSD : M-GGR/01 - Geografia
giorgio alleva	SSD : SECS-S/01 - Statistica
armando montanari	SSD : M-GGR/01 - Geografia

Partner della ricerca

IGEAT-ULB (Belgio)JIBS (Svezia)CNRS (Francia)The University of READING (Regno Unito)NIGGG - Bulgarian Academy of Sciences (Bulgaria)

MACROAREA : E

Maria Luisa Cerron Puga
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Dipartimento : Studi europei, americani e interculturali

Dangerous Reading: Inquisitorial Strategies of literary Censorship in Spain and Italy during the Countereformation Age

Letture pericolose: strategie inquisitoriali di censura letteraria in Spagna e in Italia ai tempi della Controriforma

The starting point of this research (whose outcome is intended to be a book) is the analysis of the different criteria of the Spanish and Roman Inquisition and the dialectic relationship between the two. The aim is to study the influence of literary censorship on the development of Italian and Spanish literature during the age of the Counter-Reformation. Petrarch is considered as a paradigmatic case (2009, 2010), related to a fundamental text of Spanish literature (¿Celestina irreprensible. Avatares de una censura tardía¿, in print). A largest version of the work about Petrarchists will appear in the Catalogo ragionato delle antologie petrarchiste del ¿500 (Firenze, Olschki, forecoming). The edition of the Diálogo de la dignidad del hombre (2010) analyzes the case of a text prohibited in Spain due to the similarity of its title with Manetti¿s De dignitate et excellentia hominis.

Next step is the study of the Fondo Urbinate of the Alessandrina Library in Roma (see catalogue of the exhibition held at the Rettorato, 2010) that contains a large number of prohibited and espurgati books (italian and spanish) and important

documents. The research is expected to yield very important results that will put in the forefront the extremely rich librarian patrimony of our University.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Los libros del Duque. Un recorrido por la espiritualidad y la ciencia en tiempos de la Contrarreforma. La colección de libros españoles de Francesco Maria della Rovere (1549-1631) en el Fondo Urbinate de la Biblioteca Universitaria Alessandrina di Roma
Autore/i : Cerron Puga, Maria Luisa
Anno : 2010
Pagine da - a : 1-51
Isbn : 9 788878 06 1804
Nome rivista o titolo libro o atti conferenza : Annali della Scuola Normale Superiore di Pisa. Classe di Lettere e Filosofia
Titolo : "Nel labirinto di Babilonia: Vergerio artefice della censura di Petrarca"
Autore/i : Cerron Puga, Maria Luisa
Anno : 2009
Numero volume : 1/2,
Pagine da - a : p. 387-424
Issn : 0392-095X
Nome rivista o titolo libro o atti conferenza : PROSPERI, ADRIANO ET AL.,Dizionario storico dell'Inquisizione
Titolo : Petrarca, Francesco, e petrarchismo
Autore/i : Cerron Puga, Maria Luisa
Anno : 2010
Numero volume : III
Pagine da - a : 559-567
Issn : ISBN/ISSN: 978-88-7642-323-9
Isbn : ISBN/ISSN: 978-88-7642-323-9

MACROAREA : E

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Dipartimento : Studi europei, americani e interculturali

A Linguistic Pavillion for Italian

Padiglione della Lingua Italiana: una mostra permanente

We aim at creating an Italian Language Pavillion as a permanent exhibition, aimed ai guiding the general public through the history of Italian, its nature, development and uses, from its modern origins to the present day. An exhibition of linguistic identity, Italian and European. We have identified 7 lines of research which will correspond to 7 itineraries through the exhibition:

Latin (1)
The languages of Europe (2)
Writing a language (3)
The canon of European literature (4)
Language and otherness (5)
Language and institutions (6)
Language and gender (7)

Italian existed before it became a spoken language; Dante founded the language of poetry which Petrarch exported to Europe; Bembo wrote the canon of a language he wrote masterfully, but could not speak; Manzoni established Florentine

as a national language, but would speak milanese and French. In the past century Italian has eventually become the language of Italy and its institutions and a spoken language. Dialects have not disappeared, though, and survive alongside the national language; and other languages and cultures have now become part of our national heritage: men and women born in other continents through migration and work have acquired Italian as their language and use it daily, even for artistic purposes.

Altri partecipanti alla ricerca

Arianna Punzi		SSD : L-FIL-LET/09 - Filologia e linguistica romanza
Marco Cursi		SSD : M-STO/09 - Paleografia
raffaella zanni	Under 40	SSD : L-FIL-LET/10 - Letteratura italiana

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : M. S. SAPEGNO A CURA DI. Che genere di lingua? Sessismo e potere discriminatorio delle parole.
Titolo : Lui (non) è la patria. L'uso dei sentimenti nel linguaggio autoritario
Autore/i : Nadia Cannata
Anno : 2010
Pagine da - a : 113-131
Isbn : 9788843055333
Nome rivista o titolo libro o atti conferenza : Critica del Testo
Titolo : Illustri, materne, colte, straniere: le lingue d'Italia nel Novecento e la lingua di Dante
Autore/i : Nadia Cannata (in stampa)
Anno : 2011
Numero volume : XIV/2
Pagine da - a : 00-00
Nome rivista o titolo libro o atti conferenza : CRITICA DEL TESTO
Titolo : Koiné, dialetto, lingua comune: le radici greche di un dibattito rinascimentale
Autore/i : Nadia Cannata
Anno : 2010
Numero volume : XIII/2
Pagine da - a : p. 257-271
Issn : 1127-1140

MACROAREA : E

Pietro Boitani

SSD : L-FIL-LET/14 - Critica letteraria e letterature comparate
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Dipartimento : Studi europei, americani e interculturali

Dante in England

Dante in Inghilterra

The project focuses on Dante's influence on English culture, taking into consideration both critical and literary production. Our research covers a long chronological span, but our ideal starting pointis the unprecedented development of Dante studies in England in the nineteenth century, enabled by critics such as H. F. Cary, S. T. Coleridge, U. Foscolo and Edward Moore. (Moore, who was the most influential nineteenth-century Dante scholar, edited the poet's complete works in 1894). Moreover, our project is firmly grounded in the studies of Paget Jackson Toynbee - an early twentieth-century critic who charted Dante's influence on the English literary tradition - complementing them with Morton Sills's and Ettore Allodoli's contributions, as well as with J. C. Boswell's, J. Buxton's, and D. Zancani's additions to Toynbee's work.

Focusing on form, style, and themes, we trace Dante's influence on English culture from the Middle Ages to the twentieth century, narrowing our focus on authors and works that have so far been overlooked, and broadening the scope of previous studies. Our bibliographical landmarks will be the recent contributions by Piero Boitani, V. Salerno, and D. Wallace. We will also focus on Irish literature,notably on the work of the Nobel-awarded poet Seamus Heaney.

Altri partecipanti alla ricerca

Donatella Montini		SSD : L-LIN/12 - Lingua e traduzione - lingua inglese
Francesco Paolo De Cristofaro		SSD : L-FIL-LET/14 - Critica letteraria e letterature comparate
Lucia Boldrini		SSD : L-LIN/10 - Letteratura inglese
Emilia Di Rocco		SSD : L-FIL-LET/14 - Critica letteraria e letterature comparate
Riccardo Capoferro	Under 40	SSD : L-LIN/10 - Letteratura inglese

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Metamorphosing Dante
Titolo : Irish Dante: Yeats, Joyce, Beckett
Autore/i : BOITANI PIERO
Anno : 2011
Pagine da - a : 37--59
Isbn : 978-35132-617-8
Nome rivista o titolo libro o atti conferenza : The Cambridge Companion to Dante
Titolo : Poetry and Poetics of the Creation
Autore/i : ---
Anno : 2007
Pagine da - a : 218--235
Nome rivista o titolo libro o atti conferenza : Letteratura europea e Medioevo volgare
Autore/i : P. Boitani
Anno : 2007
Isbn : 978-8815118295

MACROAREA : E

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Dipartimento : Studi greco-latini, italiani, scenico-musicali

Croce editor

Croce editore

The study is about the important critic and philosopher Benedetto Croce (1866-1952) and his deep influence on the italian culture of XX century, and in particular on the editor Giovanni Laterza and on the catalogue of Laterza's pubblications. Is the first and complete list and discussion of all the books (written by other authors) edited by Croce (from 1883 to his death, in 1952, but the research continues until 2005) with Laterza and other editors, with a long and detailed historical and critical preface.

Partner della ricerca

Edizione Nazionale delle Opere di Benedetto Croce - Ministero

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Croce editore (Edizione Nazionale delle Opere di Benedetto Croce)
Autore/i : Maria Panetta
Anno : 2006
Numero volume : 2 volumi
Isbn : 88-7088-509-7
Nome rivista o titolo libro o atti conferenza : Apocalissi e letteratura, n. 15 di «Studi (e testi) italiani»
Titolo : Croce e la catastrofe. Gli scenari apocalittici dei terremoti di Casamicciola e Reggio
Autore/i : Maria Panetta
Anno : 2005
Numero volume : 15
Pagine da - a : 155-171
Issn : 1724-3653
Nome rivista o titolo libro o atti conferenza : Memorie, autobiografie e diari nella letteratura italiana dell¿Ottocento e del Novecento
Titolo : Forme dell'autobiografia in Croce. Il «Contributo», i «Taccuini», le note editoriali
Autore/i : Maria Panetta
Anno : 2008
Pagine da - a : 749-756
Isbn : 9788846720528

MACROAREA : F

Luca Zamparelli
Under 40
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Dipartimento : Analisi economiche e sociali

The role of symmetry and asymmetry in the theory and policy of economic growth

Simmetrie ed asimmetrie nei processi di crescita economica: aspetti teorici e normativi

Since the early 90s innovation driven (R&D) growth models have been one of the fundamental frameworks economists used to understand the process of economic growth, and to design growth enhancing policies.
The standard R&D model assumes a multi-sector economy with symmetric fundamentals; accordingly, it focuses on symmetric growth, that is an equilibrium where each sector has the same amount of R&D investment and production of final good. My research analyzes the conditions under which symmetric growth is plausible, and the macroeconomic consequences and policy implications of relaxing such conditions. First, it shows that standard assumptions leave the allocation of R&D investment indeterminate. It proves, however, that the symmetric equilibrium is the unique equilibrium compatible with strong uncertainty regarding future R&D investment expectations. This is relevant as non symmetric R&D equilibria retard growth. Next, it generalizes R&D growth models to economies with asymmetric fundamentals: the associated asymmetric equilibrium is not unique, unless the future distribution of R&D investment is strongly uncertain. Last, it proves that a reallocation of resources towards more promising sectors raises growth and social welfare, thus showing that industrial policy is effective.

Altri partecipanti alla ricerca

guido cozzi		SSD : SECS-P/01 - Economia politica
paolo giordani	Under 40	SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Journal of Economic Theory

Titolo : The Refoundation of Symmetric Equilibrium in Shumpeterian Growth Models

Autore/i : Luca Zamparelli, Guido Cozzi, Paolo Giordani

Anno : 2007

Numero volume : 136

Pagine da - a : 788-797

Issn : 0022-0531

Doi : 10.1006/j.jet.2006.10.006

Nome rivista o titolo libro o atti conferenza : The Berkeley Electronic Journal of Macroeconomics

Titolo : The Relevance of Industrial Policy in a Quality-Ladder Growth Model

Autore/i : Luca Zamparelli, Paolo Giordani

Anno : 2008

Numero volume : 8 (1)

Pagine da - a : 1-28

Issn : 1935-1690

Nome rivista o titolo libro o atti conferenza : Decisions in Economics and Finance

Titolo : On Robust Asymmetric Equilibria in Asymmetric R&D-driven Growth Economies

Autore/i : Luca Zamparelli, Paolo Giordani

Anno : 2010

Numero volume : Published online: 25 November 2010

Issn : 1593-8883

Doi : 10.1007/s10203-010-0109-4

MACROAREA : F

Luca Salvati

Under 40

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Dipartimento : Analisi economiche e sociali

Long-term socioeconomic development and vulnerability to land degradation in Italy

Sviluppo economico e rischio di desertificazione in Italia: un'analisi di lungo termine

In recent years, the surface area affected by land degradation (LD) has significantly increased in southern European regions where the socioeconomic development has been proposed as a basic factor underlying the degree of vulnerability to LD. The present study investigates the correlation between several socioeconomic indicators and the level of vulnerability to Land Degradation in Italy, expressed as long-term changes in a composite index of land vulnerability. The analysis was carried out over 784 local districts. The impact of per capita value added, agricultural intensity, industrial and tourism concentration, and urban growth was separately tested on the composite index. Results indicate that a lower district value added, crop intensification, irrigation, and the level of land vulnerability to degradation are strongly associated with the increasing level of land vulnerability over time, highlighting the role of the socioeconomic development as a main process underlying LD. In this framework, spatially equitable sustainable development may represent the effective strategy to mitigate the detrimental effects of economic growth and regional disparities on Mediterranean Land Degradation.

Altri partecipanti alla ricerca

Sofia Bajocco	Under 40	SSD : BIO/07 - Ecologia
Marco Zitti	Under 40	SSD : M-GGR/01 - Geografia
Roberta Gemmiti		SSD : M-GGR/02 - Geografia economico-politica
Margherita Carlucci		SSD : SECS-S/03 - Statistica economica
Luigi Perini		SSD : AGR/02 - Agronomia e coltivazioni erbacee
Kosmas Kostas		SSD : AGR/14 - Pedologia
Agostino Ferrara		SSD : AGR/05 - Assestamento forestale e selvicoltura

Partner della ricerca

Agricultural University of Athens, Greece & Harokopio University of Athens, Department of Home Economics and Ecology

Istituto Nazionale di Statistica - Servizio Statistiche Ambientali

Consiglio per la Ricerca e la Sperimentazione in Agricoltura

Studio 'Tomaso Ceccarelli' GeoInformatics

Università degli Studi di Roma Tre, Dipartimento di Biologia Ambientale

Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Ecological Economics

Titolo : Estimating land degradation risk for agriculture in Italy through an indirect approach

Autore/i : Luca Salvati, Margherita Carlucci

Anno : 2010

Numero volume : 69

Pagine da - a : 511 - 518

Nome rivista o titolo libro o atti conferenza : Journal of Environmental Planning and Management

Titolo : Convergence or divergence in desertification risk? Scale-based assessment and policy implications in a Mediterranean country

Autore/i : Luca Salvati, Marco Zitti

Anno : 2009

Numero volume : 52(7)

Pagine da - a : 957 - 971

Nome rivista o titolo libro o atti conferenza : Ecological Economics

Titolo : Substitutability and equal weighting of environmental indicators: a proposal to estimate the importance of the different components of a composite index

Autore/i : Luca Salvati, Marco Zitti

Anno : 2009

Numero volume : 68(4)

Pagine da - a : 1093 - 1099

MACROAREA : F

Eleonora Patacchini

Under 40

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Dipartimento : Analisi economiche e sociali

Cultural Diversity and Economic Development: Challenges for Economic Policy

Diversità Culturale e Sviluppo Economico: Sfide per la Politica Economica

Economic research is continuously developing new theoretical and empirical tools aimed at understanding many aspects of human relations, such as the transmission of cultural traits; their aggregate evolution; the effects of culture in the development of political, social, religious and economic institutions; the social and spatial dimension of crime. Globalization contributes to the mixing of cultures and this poses important challenges both within and across countries. These issues are of particular relevance in the European Union given its ongoing enlargement process and its recent migration flows. How can we favor cooperation in environments with heterogeneous cultures? How is the construction of a European identity proceeding? What are the effects of different value systems on economic outcomes? Are values of legality more diffused in socially closed communities or in open and heterogeneous societies? In this research project we have produced substantial advances in the analysis of the formation, transmission and persistence of cultural values, as well as their interaction with peer effects, social structure's characteristics and standard economic incentives.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Economic Policy
Titolo : Ethnic Identity and Labor-Market Outcomes of Immigrants in Europe
Autore/i : A. Bisin, E.Patacchini, T. Verdier, Y. Zenou
Anno : 2011
Numero volume : 65
Pagine da - a : 57-92
Nome rivista o titolo libro o atti conferenza : European Economic Review
Titolo : Formation and Persistence of Oppositional Identities
Autore/i : A. Bisin, E. Patacchini, T. Verdier, Y. Zenou
Anno : 2011
Numero volume : in stampa, on-line Maggio 2011
Nome rivista o titolo libro o atti conferenza : Economics Letters?
Titolo : On the Sources of the Black-White Test Score Gap in Europe
Autore/i : E.Patacchini, Y. Zenou
Anno : 2009
Numero volume : 102
Pagine da - a : 49-52

MACROAREA : F

Salvatore Nisticò
Under 40
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Dipartimento : Analisi economiche e sociali

Monetary Policy, Growth and Financial Markets

Politica Monetaria, Crescita e Mercati Finanziari

The research project analyzes the implications for monetary policy of trend growth and stock-price dynamics, within a Dynamic Stochastic General Equilibrium New Keynesian model. In particular, the first part of the project deals with the implication of trend growth for welfare-maximing monetary policy, and shows that trend growth indeed does affect both the welfare criterion of an optimizing Central Bank and its Optimal Monetary Policy ("Trend Growth and Optimal Monetary Policy" J. of Macroeconomics, 2010). The second part of the project, deals with the monetary policy implications of stock-price dynamics, by developing an OLG extension of the basic model to introduce explicit real effects of stock-price dynamics, in both a closed and open-economy set up, and both from a theoretical and empirical perspective. The main results are that monetary policy pursuing price-stability is required to respond to stock-price

dynamics even if it origins in a foreign country, if the foreign stock market is the "leading" market ("Monetary Policy and Stock Prices in an Open Economy", JMCB, 2007) and that the new transmission mechanism that the model introduces is empirically relevant for the US economy ("Stock Market Conditions and Monetary Policy in a DSGE Model for the U.S.", JEDC, 2011)

Altri partecipanti alla ricerca

Giorgio Di Giorgio		SSD : SECS-P/01 - Economia politica
Fabrizio Mattesini		SSD : SECS-P/01 - Economia politica
Efrem Castelnuovo	Under 40	SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF MACROECONOMICS
Titolo : Trend Growth and Optimal Monetary Policy
Autore/i : MATTESINI F and NISTICO' S.
Anno : 2010
Numero volume : 32,
Pagine da - a : 797--815
Issn : 0164-0704
Nome rivista o titolo libro o atti conferenza : JOURNAL OF ECONOMIC DYNAMICS & CONTROL
Titolo : Stock Market Conditions and Monetary Policy in a DSGE Model for the U.S.
Autore/i : CASTELNUOVO E and NISTICO' S.
Anno : 2010
Numero volume : 34,
Pagine da - a : 1700--1731
Issn : 0165-1889
Nome rivista o titolo libro o atti conferenza : JOURNAL OF MONEY, CREDIT, AND BANKING
Titolo : Monetary Policy and Stock Prices in an Open Economy
Autore/i : DI GIORGIO G and NISTICO' S.
Anno : 2007
Numero volume : 39,
Pagine da - a : 1947--1985
Issn : 0022-2879

MACROAREA : F

Rossella Rega

Under 40
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Dipartimento : Comunicazione e ricerca sociale

Worlds and weapons. The war told by political leaders

Le parole e le armi. La guerra 'raccontata' dai leader politici

This study carries out an extensive research in order to analyze the communication of war's evolution in relation to the current political, communicative and technological scenario. In particular the research aims to examine the political leaders' languages in relation to the Iraq war through an investigation on a panel of progressives and conservatives Italian politicians. Political speeches expressed within 3 different communication environments with specific level of formality (statements reported by newspapers, parliamentary speeches and talk show public talks) were selected and analyzed adopting quanti-qualitative research methods. Through the integration of 3 text analysis software (Lexico, Taltac, Spad) a large corpus of data were examined (90,000 items) focusing on different levels: lexical analysis focused

on words, adjectives and verbs frequencies; metaphors and narrative dimensions of discourse analysis; frame analysis.By exploring the use of stereotypes, frames, symbol-words this research identified several interpretation frames adopted by each political area. In conclusion the analysis of politicians' language could be considered as a relevant tool to reveal the different political views on war and the different visions concerning the use of weapons in foreign policy

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Guerra, media e politica. Il conflitto in Iraq nei linguaggi dei leader politici.
Autore/i : Rossella Rega
Anno : 2008
Pagine da - a : 237 pagine
Isbn : 8888764941; 9788888764948
Nome rivista o titolo libro o atti conferenza : Problemi dell'informazione, Rivista trimestrale
Titolo : Come fare la guerra con le parole. I media e i conflitti: una rassegna.
Autore/i : Rossella Rega
Anno : 2005
Numero volume : 3
Pagine da - a : pp. 349-373
Issn : 0390-5195
Doi : 10.1445/20734
Nome rivista o titolo libro o atti conferenza : Conflitto e narrazione. Omero, i mass media e il racconto della guerra, a cura di Vittorio Mathieu
Titolo : Le parole e le armi. Le narrazioni dei media in tempo di guerra.
Autore/i : Rossella Rega
Anno : 2006
Pagine da - a : pp. 195-239
Isbn : 8815110240

MACROAREA : F

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Under 40
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Dipartimento : Comunicazione e ricerca sociale

The social and economic artist's situation in Italy

La situazione economica e sociale dell'artista in Italia

The research offers an analysis of economic and social artists' situation in Italy: in particular, attention was focused on the problem of perception and social protection of artists, in order to highlight the critical issues and listen to the needs of individuals-artists, from training to the relationship with the industry, until the actual chances of success in different communicative contexts.

In the first phase of work, the study aimed to photograph the world of artists in Italy, starting from an extensive bibliographic collection includes both the sociological literature on the transformation of art in the age of new media, that the documents produced by the Italian institutions.

Subsequently, the questionnaire was constructed for the required quantitative survey, which was administered to the entire universe of artists (1369 subjects belonging to 4 categories: painters, playwrights, sculptors and musicians) of ENAPPSMSAD. Based on 435 questionnaires received was started during the computer processing of data through the use of statistical software (SPSS). The topics have included: living as an artist, professional status, a relationship with the entity and suggestions.

Altri partecipanti alla ricerca

Francesca Rizzuto		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Luisa Chiellino	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Angelo Passero	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

Partner della ricerca

ENAP-PSMSAD;

Unione Nazionale Scrittori e Artisti - UIL UNSA

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Spazi comunicativi contemporanei

Autore/i : Stella Renato, Morcellini Mario, Lalli Pina

Anno : 2008

Isbn : 8835960568

Nome rivista o titolo libro o atti conferenza : Rapporto di ricerca La situazione sociale ed economica dell¿artista in Italia?

Autore/i : Mario Morcellini, Francesca Rizzuto, Giovanni Prattichizzo, (a cura di),

Anno : 2010

MACROAREA : F

Lorenza Parisi

SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

Email : lorenza.parisi@uniroma1.it

Dipartimento : Comunicazione e ricerca sociale

The disintermediation on political communication and the role of social media

La disintermediazione della comunicazione politica e il ruolo dei media sociali

Altri partecipanti alla ricerca

Rossella Rega	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Marinelli e Cioni (a cura di), Le Reti della ComunicazionePolitica. Tra Televisioni e Social Network. ?

Titolo : La comunicazione degli attori politici: tra
disintermediazione e media sociali

Autore/i : Lorenza Parisi e Rossella Rega

Anno : 2010

Pagine da - a : pp. 69-93

Isbn : 978-88-6453-131-1

Nome rivista o titolo libro o atti conferenza : De Blasio et al. ?
(a cura di), Ledership and new trends in political ?
communication ?

Titolo : "Disintermediation on Political Communication:
chance or missed opportunity?"

Autore/i : Lorenza Parisi, Rossella Rega

Anno : 2011

Nome rivista o titolo libro o atti conferenza : Marinelli e Cioni (a cura di), Le Reti della ComunicazionePolitica. Tra Televisioni e Social Network. ?
Pagine da - a : pp. 157-190
Isbn : 978-88-6536-008-8

MACROAREA : F

Mario Morcellini
SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
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Dipartimento : Comunicazione e ricerca sociale

University changes. Researches on innovation, reforms and didactics

L'Università che cambia. Ricerche su innovazione, riforme e didattica

The study is part of multi-year research activities about university communication and reforms,carried out also in collaboration with the Ministry of Education,University and Research. It is articulated in three specific lines of investigation with the following objectives:analyzing the reforms,monitoring the ways in which media represent the university system and developing a critical evaluation of stakeholders' opinions.

A preliminary collection of the university system changes was conducted through the analysis of the fourteenth and fifteenth Legislature main laws. The research was focused on the social and cultural sense of the reforms,also with a glance to the international context.

In the second part,about 1500 articles published during the period 1999-2009 by main national newspapers were analyzed trough quantitative and qualitative methodologies:the research identified new words,figures of speech and stereotypes in media coverage of reforms.

The third line analyzed the university system changes from professors and students point of view.The survey,carried out in 2007-08,was based on a national analysis of stakeholders expectations about the application of the "3+2" model in Italy during the transition from the first to the second phase of didactic reform.

Altri partecipanti alla ricerca

Marco Bruno	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Andrea Cerase		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Paolo Fedeli	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Francesca Colella	Under 40	SSD : SPS/07 - Sociologia generale
Letteria Fassari		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Giovanna Gianturco		SSD : SPS/07 - Sociologia generale
Valeria Lai	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Raffaele Lombardi	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Andrea Lombardinilo	Under 40	SSD : M-PED/01 - Pedagogia generale e sociale
Valentina Martino	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Paola Panarese	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Maria Concetta Pitrone		SSD : SPS/07 - Sociologia generale
Elena Valentini	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Rosanna Consolo	Under 40	SSD : SPS/07 - Sociologia generale

Partner della ricerca

Ministero dell'Istruzione, Università e Ricerca
AICUN-Associazione Italiana Comunicatori d'Università

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : L'Università al futuro. Sistema, progetto, innovazione

Autore/i : Mario Morcellini, Antonello Masia (a cura di)

Anno : 2009

Isbn : 8814-14188-6

Nome rivista o titolo libro o atti conferenza : Il cantiere aperto della didattica. Una strategia di innovazione oltre le riforme

Autore/i : Curatori: Mario Morcellini, Nicola Vittorio.

Altri autori: Andrea Cerase,Virginia Patriarca,Angelo Passero,Federica Cardia,Antonio Di Stefano,Christian Ruggiero

Anno : 2007

Isbn : 978-88-8232-553-4-bis

Nome rivista o titolo libro o atti conferenza : Vite da studenti. La condizione studentesca nel sistema del 3+2

Autore/i : Curatori: Mario Morcellini, Giovanna Gianturco, Valentina Martino.

Altri autori: Marina Ciampi, Gabriella Fazzi, Paolo Grossi, Laura Iannelli, Federico Jorio, Patrizia Laurano, Anna Maria Paola Toti.

Anno : 2010

Isbn : 978-88-95962-72-6

MACROAREA : F

ANTONIO FASANELLA

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Dipartimento : Comunicazione e ricerca sociale

Research-action on students of high school in four areas of Latium to prepare, implement and evaluate a communication campaign about the risks from exposure to radiation sources.

Ricerca-intervento riguardante gli studenti delle scuole medie superiori di quattro zone della Regione Lazio, al fine di predisporre, attuare e valutare una campagna di informazione/sensibilizzazione circa i rischi da esposizione a sorgenti di radiazioni

The Institute for Environmental Research and Protection and the Ministry of Environment have entrusted to the Department Coris of Sapienza Coris a research-action to prepare, implement and evaluate a communication campaign to the population of Latium (young people aged between 14 and 19) about the risks from exposure to radiation sources. The choice fell on students of high schools in four areas of Lazio.

We used a quasi-experimental survey design. You have selected a sample of the limited population, which has been divided into an experimental group (GS) and a control group (GC). We gave a first test (pretest) on the two groups, we then proceeded to conduct the information campaign at the GS and the administration of a second test (posttest) of both groups to evaluate the changes.

Students have achieved a total of 2,635.

The analysis of evolution in the transition from first to second follow-up skills on the topic of radioactivity was addressed through several measures, analytic and synthetic. They have confirmed the success of the information campaign.

Altri partecipanti alla ricerca

Alessandra Decataldo	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Chiara Coluccia	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Maria Paola Faggiano	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Francesco Truglia		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Francesca Marconi	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Pasquale di Padova	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Albo Nievo	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Alessandra Decataldo	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Manlio Maggi		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Partner della ricerca

Istituto superiore per la ricerca e la protezione ambientale

Ministero dell'ambiente e della tutela del territorio e del mare

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Le conoscenze giovanili sulle radiazioni ionizzanti. Intervento e valutazione nelle scuole superiori del Lazio

Autore/i : A. Fasanella e M. Maggi (a c. di)

Anno : 2011

Numero volume : 4

Pagine da - a : 1-231

Isbn : 978-88-448-0489-3

MACROAREA : F

ida cortoni

Under 40

SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

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Dipartimento : Comunicazione e ricerca sociale

On Air. The european project on media education

On Air. The european project on media education

The On Air project aims to foster teachers' abilities and attitudes, useful to use and ¿exploit¿ the potential of media, for the appeal they have on new generations: with and through new media, you should be able to motivate the younger generation in rediscovering and in appreciating the importance of writing ability, and of the ability needed to become a conscious user.

The project has been structured in four phases:

Phase 1 ¿ Preliminary research for the analysis of needs: this is a preliminary phase aimed in knowing teachers¿ and students¿ expectations toward the use of new media. Research is based on quantitative and qualitative methodologies.

Phase 2 ¿ Collection, analysis, and evaluation of ME practices: the purpose is to collect data about ME experiences and school projects that are aimed at developing reading and writing ability, and a critical sense and consciousness in the use of media.

Phase 3 ¿ Planning and processing on-line available educational units: the purpose is to work out eight ME training modules. The media competence areas are: reading skills; writing skills; critical thinking skills and user skills.

Phase 4 ¿ Testing and evaluating educational units: in every country, a pilot group of teachers test educational units in order to evaluate their quality and efficacy.

Altri partecipanti alla ricerca

Gianna Cappello		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Mario Morcellni		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Maria Ranieri		SSD : M-PED/03 - Didattica e pedagogia speciale
Alberto Parola		SSD : M-PED/03 - Didattica e pedagogia speciale
Bruno Mazzara		SSD : M-PSI/05 - Psicologia sociale
Angelo Passero	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

Gianna Cappello		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Daniela Cinque	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Federica Cardia	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Chiara Ribaldo	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Enrica Bolognese	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Valentina Angeli		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Paolo Enrico Bobbio		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Alessandro Borio		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Paolo Carboni		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Luisa Chiellino	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Elena Corelli	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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Pierpaolo De Luca		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Elisabetta Delle Donne		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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Ilaria Fioravanti	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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Giuseppe Gizzi	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Piercarlo Mrinelli	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Salvatore Satta	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Sabina Guadagni		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Marco Guastavigna		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
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Sara Matutino		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Laura Parenti		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Liana Peria		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Guido Petrangeli	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Matilde Pettinelli		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Paola Pieralli		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Daniela Robasto		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Alessia Rosa	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Roberto Trinchero		SSD : M-PED/04 - Pedagogia sperimentale
Stefano Sgarella		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Anna Rita Vizzari		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Mariangela Volpe	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Spartaco Vitiello		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Luisa Zampieri		SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Beate Weyland		SSD : M-PED/03 - Didattica e pedagogia speciale

Partner della ricerca

Pixel (Italia)

Inforef (Belgio)

Zinev Art Technology (Bulgaria)

Kaunas University (Lituania)

Media Monitoring Agency (Romania)

WSINF (Wyzsza Szkola Informaryky)

Esasy Technology (Italia)

Med (Italia)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Media education in action. A research study in six European countries

Autore/i : Alberto Parola, Maria Ranieri

Anno : 2010

Isbn : 978-88-6453-215-8

Nome rivista o titolo libro o atti conferenza : Young digizen? New cultural challenges in media education

Autore/i : Ida Cortoni

Anno : 2011

Isbn : 978-88-568-4015-5

MACROAREA : F

Roberta Cipollini

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Dipartimento : Comunicazione e ricerca sociale

Strangers in the metropolis

Stranieri nella metropoli

The theoretical

network of the empirical research "Stranieri nella metropoli" refer to three topics: 1) urbanism as a lifestyle (Simmel, Park, Wirth, Lofland); 2) the process of individualization, according to the analysis made by Bauman, Beck, Inglehart, who outline three scenarious of second modernity. The lifestyle in a metropolis is the background against wich the core of the research is centred: the ideology of prejudice and its relationships with cognitive traits.

The empirical outcomes of reasearch, who use as instrument of analysis two Likert scale, shows how the prevalente dimension of the cognitive component of prejudice is formed by the representation of the stranger definided by Sociology (struggle, contamination, deviance, objectivity); minimizing this features makes perception of its role in change more visibile.

The analysis of the ideological component of prejudice, shows simmetry with cognitive traits: ideological sincretism, of pseudo-universalistic, differential, subaltern integration contents are compared to equal integration.

A statistical model of structural equations was applied to data structure, in order to recostruct the casual path of the influenctial factors of prejudice and confirmes the presence of multiple causes (Allport).

Altri partecipanti alla ricerca

Isabella Mingo SSD : SECS-S/05 - Statistica sociale

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Stranieri nella metropoli

Titolo : La cusazione multipla del pregiudizio: analisi del modello statistico

Nome rivista o titolo libro o atti conferenza : Stranieri nella metropoli
Autore/i : Roberta Cipollini
Isabella Mingo
Anno : 2007
Numero volume : n.83
Pagine da - a : 201-223
Issn : 1121 - 1148
Nome rivista o titolo libro o atti conferenza : Stranieri nella metropoli
Titolo : La rete teorica
Autore/i : Roberta Cipollini
Anno : 2007
Numero volume : n.83
Pagine da - a : 7-30
Issn : 1121 - 1148
Nome rivista o titolo libro o atti conferenza : Stranieri nella metropoli, n. 83 (monografico), rivista Sociologia e Ricerca Sociale
Autore/i : Roberta Cipollini (a cura di)
Anno : 2007
Numero volume : n. 83
Pagine da - a : 1-255
Issn : 1121 - 1148

MACROAREA : F

Andrea Cerase

SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Dipartimento : Comunicazione e ricerca sociale

The Policlinic Tragedy. Syles in media portrayals of healt organisation starting from the "Umberto I case"
La tragedia del Policlinico. Stili della rappresentazione mediale della sanità a partire dal "caso Umberto I"

The portrayals of social reality supplied by media are often built on narrative plots: facts and allegations are continuosly entangled in stories connecting real events such scandals, emergencies, heinous crimes, with public and political debate and affecting social behaviours and individual attitudes. Media are used to arrange all these informations into shared narrative frames: in these intense coverage moments of a scandal story, media apply specific storytelling models, "scripts" used to build policies, explanations and journalistic responses to public.
The "Policlinico scandal case" provided a great opportunity for analysis of storytelling dynamics, agenda building, social problems definition and public policies construction, creating a unique moment to explore links between events and media attention, social imaginery and "medical malpractice" through the lens of Classic Greek Tragedy.
Narrative structure of coverage, storytelling logics, role of newsmedia in reproduction of social norms and shared values were considered from content analysis perspective, allowing a striking and effective reconstruction of events during the scandal, which not only provides an attractive metaphor but a coherent descriptive and explanatory model about media work in a crisis contex.

Altri partecipanti alla ricerca

Marco Binotto		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Rossella Rega	Under 40	SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Antonio Di Stefano		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi
Michaela Liuccio		SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Problemi dell'Informazione

Titolo : Lo scandalo Umberto I. La cronaca della malasanità come tragedia greca

Autore/i : Marco Binotto, Andrea Cerase, Antonio Di Stefano

Anno : 2008

Numero volume : 3

Pagine da - a : 291-332

Issn : ISSN : 0390-5195

Doi : DOI: 10.1445/28114

Nome rivista o titolo libro o atti conferenza : La malasanità in scena. Come nasce un "caso mediale".

Titolo : L'«ennesimo scandalo» dall'evento al tema: il copione standard del problema "malasanità"

Autore/i : Marco Binotto

Anno : 2001

Nome rivista o titolo libro o atti conferenza : La malasanità in scena. Come nasce un caso mediale

Titolo : Scandali sanitari, media hypes e capri espiatori

Autore/i : Andrea Cerase

Anno : 2011

MACROAREA : F

Marco Bruno

Under 40

SSD : SPS/08 - Sociologia dei processi culturali e comunicativi

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Dipartimento : Comunicazione e ricerca sociale

Islam-Media. Representation of Islam in Italian Media

Islam-Media. Rappresentazioni dell'Islam nei media italiani

In recent years, Islam and Muslims are at the center of public debate for both international politics and the radicalization of some positions in the debate that involves western countries face of the challenges of cultural integration of immigrants. This prominence in public discourse is accompanied by a widespread and accepted (at least in the scientific field) process of distortion of Islam, especially conducted by mass communication.

The research aim was to recognize the mechanisms of representation of Islam within the Italian media landscape, "triangulating" general theoretical considerations (about Orientalism, Social construction of the Other, Media Framing, etc.), international literature and empirical evidence. This empirical section, as well the investigation and quantification the representations of Islam in the Italian media, has allowed us to isolate the main stereotyped forms, analyzing and highlighting those of greater weight and longer life. One of the main evidence is the prevailing "visual" dimension of stereotypes (often even in the absence of distortions in written or spoken texts) through an analysis of the icons with which Islam and Muslims are "staged", creating and reinforcing the stereotypical representations of this very complex "cultural universe".

Altri partecipanti alla ricerca

Roberto Gritti SSD : SPS/11 - Sociologia dei fenomeni politici

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Oltre l'Orientalismo e l'Occidentalismo. La rappresentazione dell'Altro nello spazio euro-mediterraneo

Titolo : Islam e comunicazione. L'orientalismo latente e la media logic

Nome rivista o titolo libro o atti conferenza : Oltre l'Orientalismo e l'Occidentalismo. La rappresentazione dell'Altro nello spazio euro-mediterraneo
Autore/i : Marco Bruno
Anno : 2009
Pagine da - a : 269 - 283
Isbn : 978-88-6250-016-6
Nome rivista o titolo libro o atti conferenza : Istantanee di un islam glocale. Materiali per una sociologia dell'islam in Europa, tra identità e rappresentazioni
Autore/i : Marco Bruno
Anno : 2009
Isbn : 9788861343993
Nome rivista o titolo libro o atti conferenza : L'Islam immaginato. Rappresentazioni e stereotipi nei media italiani
Autore/i : Marco Bruno
Anno : 2008
Isbn : 978-88-8107-265-1

MACROAREA : F

Maurizio Bonolis
SSD : SPS/07 - Sociologia generale
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Dipartimento : Comunicazione e ricerca sociale

The social rehabilitation and criminal recidivism among cases followed by Probation Office with reference to drug depending subjects

Il fenomeno del reinserimento sociale e della recidiva dei soggetti in esecuzione penale esterna con particolare riferimento ai tossicodipendenti

The work concerns a study on the effects of application of the rule of Probation as an alternative measure to detention, as provided by Italian Law 354 of 1975.
The work stems from a collaboration between the Probation Office of the Regional Superintendency of the Penitentiary Administration, based in Rome and the Department of Social Research and Sociological Methodology "GianniStatera", at University Sapienza of Rome.
The working hypothesis adopted is that the detention involves contrasting consequences. On the one hand, the effects of deterrence against the commission of crimes, produced by the anticipation of undesirability of criminal punishment. On the other hand, the perverse effects of reinforcement of the conditions of crime, linked to both the material and psychological deconstruction of the prison inmates in relation to both the processes of socialization to the crime, the prison pantry through the dynamics of interaction between them.
The survey results highlight how the institution of probation, because of its function alternative to prison is likely to affect these contrasting consequences recurrence, ie the probability of committing new offenses and at the same time, promoting the social reintegration of persons who have exhausted their penal treatment.

Altri partecipanti alla ricerca

Alessandra Decataldo	Under 40	SSD : SPS/07 - Sociologia generale
Gilda Losito		SSD : SPS/12 - Sociologia giuridica, della devianza e mutamento sociale
Barbara Sonzogni	Under 40	SSD : SPS/07 - Sociologia generale
Pio Marconi		SSD : SPS/12 - Sociologia giuridica, della devianza e mutamento sociale
Loris Di Giammaria	Under 40	SSD : SPS/07 - Sociologia generale

Partner della ricerca

Ufficio UEPE di Roma

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Recidività e reinserimento. L'affidamento in prova al servizio sociale nel Lazio

Autore/i : Maurizio Bonolis (a cura di)

Anno : 2010

Numero volume : 9

Pagine da - a : 1-278

Isbn : 9 788877 967985

MACROAREA : F

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Dipartimento : Comunicazione e ricerca sociale

Practices of interethnic coexistence in meaningful contexts of action. Italian and foreign students at "Sapienza"

Pratiche di convivenza interetnica in contesti significativi di azione. Studenti italiani e stranieri alla "Sapienza"

Multiculturalism has become a structural data of our society, although in Italy its most obvious manifestations are much less numerous and significant than what happens in other nations. There has, in fact, in Italy, increasingly, forms of coexistence between Italians and foreigners in confined environments, in contexts such as school, work and family.

An extremely significant context of inter-ethnic coexistence is student houses, that are characterized by the fact that cohabitation is forced rather than freely chosen.

Between 2007 and 2008 we realized a survey research with the goal of inquiring social forms/formations of inter-ethnic coexistence in the context of the student house of Sapienza University of Rome. Among the six student residences available, we chose (based on housing type, size, composition and urban location) three (De Lollis, Macao, De Dominicis). In these houses we attempted to interview all of the inhabitants.

Altri partecipanti alla ricerca

Alessandra Decataldo	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Chiara Coluccia	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Enrico Nerli Ballati	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
MARIA PAOLA FAGGIANO	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Sergio Mauceri	Under 40	SSD : SPS/07 - Sociologia generale
Barbara Sonzogni	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Ernesto Fabbricatore	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica
Giovanni Lo Giudice	Under 40	SSD : M-PSI/02 - Psicobiologia e psicologia fisiologica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Spazi, identità, relazioni. Indagine sulla convivenza multiculturale nelle residenze universitarie

Autore/i : Maria Stella Agnoli (a c. di)

Anno : 2010

Pagine da - a : 1-265

Isbn : 978-88-568-3130-6

MACROAREA : F

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Dipartimento : Diritto ed economia delle attività produttive

Ex Uno Plures. Welfare Without Illusion.

Dall'unità alla molteplicità. Benessere senza illusione.

Two competing visions of federalism have long held sway. The first is centered on the idea of an administrative system of delegation based on a geographic partitioning of the polity. The second view sees federalism as a bottom-up structure in which the larger polity is a construct of the smaller polities of which it is composed. In this research, the object is to use these rival visions of a federal structure as a lens through which to analyze the various interconnections between the welfare state and its financing. One important aspect is the attitude taken toward grants from the central to subsidiary-level governments. In the top-down view, such grants represent simply the judgment that taxes and expenditures are subject to different patterns of optimal decentralization. In the bottom-up view, such grants break what is a critical link between spending and taxing decisions at the level of each sub-national jurisdiction. Each government at its own level has the potential to instantiate the logic of exchange, but no such exchange can be envisaged if the fiscal system does not require each government to 'pay its own way' in relation to the expenditure commitments which that government makes.

Altri partecipanti alla ricerca

GEOFFREY BRENNAN SSD : SECS-P/03 - Scienza delle finanze

Partner della ricerca

EUROPEAN CENTER FOR THE STUDY OF PUBLIC CHOICE

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : REVIEW OF LAW & ECONOMICS
Titolo : Ex Uno Plures. Welfare Without Illusion.
Autore/i : GEOFFREY BRENNAN, GIUSEPPE EUSEPI
Anno : 2010
Numero volume : Vol. 6
Pagine da - a : 325-502
Issn : 1555-5879
Doi : 10.2202/1555-5879.1541
Nome rivista o titolo libro o atti conferenza : REVIEW OF LAW & ECONOMICS
Titolo : Introduction: Ex Uno Plures. Welfare Without Illusion.
Autore/i : GEOFFREY BRENNAN, GIUSEPPE EUSEPI
Anno : 2010
Numero volume : 6
Pagine da - a : 325-328
Issn : 1555-5879
Doi : 10.2202/1555-5879.1535
Nome rivista o titolo libro o atti conferenza : REVIEW OF LAW & ECONOMICS
Titolo : Polycentric Polity: Genuine vs. Spurious Federalism.
Autore/i : GIUSEPPE EUSEPI, RICHARD E. WAGNER
Anno : 2010
Numero volume : 6
Pagine da - a : 329-345

Nome rivista o titolo libro o atti conferenza : REVIEW OF LAW & ECONOMICS
Issn : 1555-5879
Doi : 10.2202/1555-5879.1534

MACROAREA : F

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Dipartimento : Economia e diritto

Productivity, investment and economic growth under market imperfections

Produttività, investimento e crescita economica con inperfezioni di mercato

The research aims at exploring causes and consequences of productivity dynamics in a context of imperfect markets. The low levels of productivity growth observed in Italy can be explained by the interplay of several imperfections. An imperfect financial system showed itself as unable to efficiently diversify the risks stemming from innovation. An imperfect labor market characterized by capital-skill complementarities, contractual incompleteness and the presence of different types of worker produced duality and perverse incentives to producers. In an imperfect market for goods the perverse incentives coming from the labor market led, on the supply side, risk averse and financially constrained traditional producer to increase unskilled labor input and to reduce capital accumulation.
In the presence of real rigidities in the labor market and of firm-specific capital, when the R&D sector does generate innovations, the endogenous dynamics of the TFP can change the cyclical dynamics triggered by shocks. Looking at TFP as endogenous to the accumulation process, the opposite direction of causality prevented innovation to generate a positive production externality having permanent effects on the level of potential output.

Altri partecipanti alla ricerca

Enrico Saltari	SSD : SECS-P/01 - Economia politica
Marilena Giannetti	SSD : SECS-P/01 - Economia politica
Paolo Piacentini	SSD : SECS-P/01 - Economia politica
Massimiliano Tancioni	SSD : SECS-P/02 - Politica economica
Claudio De Vincenti	SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF SOCIO-ECONOMICS
Titolo : The role and significance of endogenous firing costs in a matching model with endogenous job destruction
Autore/i : Saltari E., Tilli R.
Numero volume : 38
Pagine da - a : 799-808
Issn : ISSN: 1053-5357
Nome rivista o titolo libro o atti conferenza : REVIEW OF POLITICAL ECONOMY
Titolo : Finance and the Cambridge equation: Again on the rate of profits of financial intermediaries
Autore/i : Ciccarone G.
Anno : 2008
Numero volume : 20
Pagine da - a : 435-443
Issn : ISSN: 0953-8259 0953-8259
Nome rivista o titolo libro o atti conferenza : ECONOMICS LETTERS
Titolo : REVISITING THE ROLE OF MULTIPLICATIVE UNCERTAINTY IN A MODEL WITHOUT INFLATIONARY BIAS
Autore/i : Ciccarone G., Marchetti E.

Nome rivista o titolo libro o atti conferenza : JOURNAL OF SOCIO-ECONOMICS
Anno : 2009
Numero volume : 104
Pagine da - a : 37-39
Issn : ISSN: 0012-978X

MACROAREA : F

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Dipartimento : Economia e diritto

Intellectual Property Rights Protection and endogenous Growth

Tutela dei diritti di proprietà intellettuale e crescita endogena

The key elements that determine sustained growth in R&D-based growth models are the research sector and the strength of intellectual property rights (IPR). This research aims at exploring how the modeling of these two elements affects economic development and growth. Specifically, the main objective of the research is to explain how differences in R&D realizations and IPR protection can affect R&D investment and long-run growth. In doing so, the research will try to extend standard theoretical model of endogenous growth in two direction. Firstly, it will try to extend the standard Schumpeterian model of growth with creative destruction to the case of stochastic innovation sizes and explore the growth implications of heterogeneous firm size. Secondly, it will try to extend a standard North-South model of growth with R&D investment and endogenous firm location to the case of decreasing returns to scale in research. The research will focus on the theoretical facets of such extensions and will try to provide the possible policy implications for sustained economic growth.

Altri partecipanti alla ricerca

Antonio Minniti	Under 40	SSD : SECS-P/01 - Economia politica
Paul Segerstrom		SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Regional Science and Urban Economics
Titolo : Trade Integration and Regional Disparity in a Model of Scale-Invariant Growth
Autore/i : MINNITI A, PARELLO C.
Anno : 2011
Numero volume : 41
Pagine da - a : 20-31
Issn : 0166-0462
Nome rivista o titolo libro o atti conferenza : Economic Theory
Titolo : A Schumpeterian Growth Model with Random Quality Improvements
Autore/i : MINNITI A, PARELLO C., SEGERSTROM P
Anno : 2011
Numero volume : In press
Issn : 0938-2259

MACROAREA : F

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Global Challenges and Global Public Goods

Sfide globali e finanziamento di beni pubblici globali

In this research we revisit the impact of global public goods in Official Development Assistance budgets using panel data covering twenty-two DAC countries during the period 1973-2009. Econometric analysis reveals a weak crowding-out effect of other forms of aid and an increasing provision of weakest-link technology Global Public Goods. By estimating an individual fixed-effect modelfor the unbalanced dataset of 22 countries, we analyze the potential determinants of aid financing of Global Public Goods and we find a significant role played by variables expressing donors¿ public finance constraints, openness to the rest of the world and preferences for domestic expenditures.

Altri partecipanti alla ricerca

Alessandra Cepparulo Under 40 SSD : SECS-P/03 - Scienza delle finanze

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Governance and distributional issues in global public goods
Titolo : Insights in Aid Financing of Global Public Goods
Autore/i : GIURIATO L. and CEPPARULO A
Anno : 2011
Pagine da - a : 139--181
Isbn : 978-88-95814-42-1
Nome rivista o titolo libro o atti conferenza : World Development
Titolo : Global Challenges and Country-Specific Responses through Aid Financing of Global Public Goods
Autore/i : Alessandra Cepparulo e Luisa Giuriato

MACROAREA : F

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Monetary-fiscal policy interactions and debt management

Interazione tra politiche fiscali e monetaria e gestione del debito pubblico

This research has investigated the interaction between fiscal and monetary policies within the EMU, with a focus on public debt management. The main results are as follows:

-Since default benefits domestic taxpayers but hurts bond-holders, for ?rich? domestic individuals the net effect is negative. Their interests thus coincide with those of foreigner bond-holders. In these circumstances, the critical issue is whether a coalition of wealthy residents and foreign bond-holders can create political pressure strong enough to avoid default. Using a lobbying model, we show that this might indeed the case if only wealthy residents and foreigners are able to exert political pressure (RIE paper)

-With reference to the current debate on reforming EU institutions, our analysis supports the view that institutional design should aim at the creation of a supra-national fiscal entity responsible for the conduct of fiscal policy and partner of the ECB in the conduct of macroeconomic stabilization. For the European Fiscal Authority to act as an autonomous policy-maker it should be control it own instrument. To respond to euro-wide shocks and to operate the needed redistribution in case of asymmetric shocks, the creation of an important federal budget might be needed. (RDE paper)

Altri partecipanti alla ricerca

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Lilia Cavallari	SSD : SECS-P/01 - Economia politica
Laura Sabani	SSD : SECS-P/01 - Economia politica
Sergio Ginebri	SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Review of International Economics
Titolo : Sovereign debt capacity and the distribution of domestic wealth: a common agency model
Autore/i : Di Gioacchino Debora, Ginebri Sergio e Sabani Laura
Anno : 2008
Numero volume : 16(4)
Pagine da - a : 798¿813
Doi : 10.1111/j.1467-9396.2008.00776.x
Nome rivista o titolo libro o atti conferenza : Empirica
Titolo : Monetary and Fiscal Policy Coordination: Strategies and Institutions
Autore/i : Di Bartolomeo G. a D. Di Gioacchino
Anno : 2008
Numero volume : 35(4)
Pagine da - a : 433-448
Doi : 10.1007/s10663-008-9077-0
Nome rivista o titolo libro o atti conferenza : Review of Development Economics
Titolo : Macroeconomic stabilisation in the EMU: rules versus institution
Autore/i : Cavallari L. e D. Di Gioacchino
Anno : 2005
Numero volume : 9(2)
Pagine da - a : 264-276

MACROAREA : F

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International Protection of Foreigners in Italy

La protezione internazionale degli stranieri in Italia

In the past ten years, the European Union has adopted three fundamental directives regarding the reception of asylum seekers in 2003; the qualification and status of refugees or persons who otherwise need international protection and the content of the protection in 2004; the procedures for granting international protection in 2005. Subsequently, the Italian legislator has transposed such directives with three legislative decrees, which have entered into force in 2005-2008.
The research aims to describe the evolution and the current state of the Italian system of protection of asylum seekers and refugees, comparing the national legislation with the European regulation and pointing out best and bad practices of the Italian administrative bodies involved in asylum. The research has produced a significant number of articles by the co-coordinator and by the other members of the group on main academic reviews and culminated in the publication of the volume "La protezione internazionale degli stranieri in Italia. Uno studio integrato sull'applicazione dei decreti di recepimento delle direttive europee sull'accoglienza, sulle qualifiche e sulle procedure", (ed. M. Benvenuti), published in the book series of the Section of Public Law and Economics of the Department of Economics and Law.

Altri partecipanti alla ricerca

Roberto Miccù		SSD : IUS/09 - Istituzioni di diritto pubblico
Vincenzo Atripaldi		SSD : IUS/09 - Istituzioni di diritto pubblico
Francesca Angelini		SSD : IUS/09 - Istituzioni di diritto pubblico
Michela Giachetti Fantini	Under 40	SSD : IUS/09 - Istituzioni di diritto pubblico
Arianna Cascelli	Under 40	SSD : IUS/09 - Istituzioni di diritto pubblico
Ennio Codini		SSD : IUS/09 - Istituzioni di diritto pubblico
Marina D'Odorico	Under 40	SSD : IUS/09 - Istituzioni di diritto pubblico
Daniela Di Rado		SSD : IUS/09 - Istituzioni di diritto pubblico
Maria Giovanna Fidone		SSD : IUS/09 - Istituzioni di diritto pubblico
Gianluca Bascherini		SSD : IUS/08 - Diritto costituzionale

Partner della ricerca

Consiglio italiano per i rifugiati (CIR)

Fondazione Iniziative e studi sulla multietnicità (ISMU)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Diritto, immigrazione e cittadinanza

Titolo : Andata e ritorno per il diritto di asilo costituzionale

Autore/i : Marco Benvenuti

Anno : 2010

Numero volume : 2

Pagine da - a : 36-58

Issn : 1720-433X

Nome rivista o titolo libro o atti conferenza : Rivista dell'Associazione italiana dei Costituzionalisti

Titolo : La protezione internazionale

Autore/i : Marco Benvenuti

Anno : 2010

Numero volume : 0

Pagine da - a : 1-9

Issn : 2039-8298

Nome rivista o titolo libro o atti conferenza : La protezione internazionale degli stranieri in Italia. Uno studio integrato sulla applicazione dei decreti di recepimento delle direttive europee sulla accoglienza, sulle qualifiche e sulle procedure

Autore/i : Marco Benvenuti (a cura di)

Anno : 2011

Pagine da - a : I-XXIV e 1-854

Isbn : 978-88-243-0000-0

MACROAREA : F

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Economic integration and the diversity of institutions and social norms

Integrazione economica e diversità di istituzioni e norme sociali

Traditional international economists often associate national institutional diversities with government policies alone. Yet

(even for given technologies and factor endowments) there exists a variety of institutional and social arrangements, going far beyond official economic policy, that demarcate different populations and tend to endure long after the disappearance of the their initial causes. While this fact can be explained in periods of limited contact among geographically separated areas, it is puzzling in the present era of globalization. Institutions and social preferences have indeed proven to be highly persistent. However, they are neither exogenous nor historically given, but actually change in response to shocks, such as increasing openness to international trade and factor mobility. Hence, on the one side cross-country differences in institutions and social preferences affect economic outcomes and the patterns of economic integration; on the other side economic integration feeds back on domestic institutional and social arrangements. In the present research project we investigate these issues, both theoretically and empirically, building on the most recent developments of behavioral, institutional, and international economics.

Altri partecipanti alla ricerca

Samuel Bowles SSD : SECS-P/01 - Economia politica

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : THE B.E. JOURNAL OF THEORETICAL ECONOMICS
Titolo : Cross-Cultural Trade and Institutional Stability
Autore/i : BELLOC M.
Anno : 2009
Numero volume : 9(1)
Pagine da - a : article 34
Issn : 1935-1704
Nome rivista o titolo libro o atti conferenza : REVIEW OF INTERNATIONAL ECONOMICS
Titolo : International Specialization and Labor Unions: Evidence from OECD Countries
Autore/i : BELLOC M.
Anno : 2009
Numero volume : 17 (1)
Pagine da - a : 34--50
Issn : 0965-7576
Nome rivista o titolo libro o atti conferenza : JOURNAL OF ECONOMIC SURVEYS
Titolo : Institutions and International Trade: a Reconsideration of Comparative Advantage
Autore/i : BELLOC M.
Anno : 2006
Numero volume : 20 (1)
Pagine da - a : 3--26
Issn : 0950-0804

MACROAREA : F

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Drivers of e-brand attitude. An empirical study

I driver percettivi dell'atteggiamento verso la marca digitale. Un'indagine empirica

Digitization and the growing importance of online environments require specific approaches for analyzing and managing e-brands. With a focus on pure players? corporate websites, the aim of our study is to analyze the main determinants of

users? e-brand attitudes. In doing so, our study considers three key variables relating to the e-brand attitudes: interactivity, personalization, and e-trust. A quantitative empirical study was conducted, and data were analyzed using structural equation modeling. The results show that the key determinants of user attitudes toward e-brands are interactivity (indirect) and personalization (direct). To a lesser extent, e-trust is a factor that has a significant effect on e-brand attitudes.
Furthermore, it is the interrelationships among these constructs which are of particular interest. This study could serve both as a theoretical reference point for future research and as a managerial tool for the integrated evaluation of the multidimensional relationships among e-brand attitude key drivers.

Altri partecipanti alla ricerca

Camilla Barbarossa	Under 40	SSD : SECS-P/08 - Economia e gestione delle imprese
Angelo Giraldi	Under 40	SSD : SECS-P/08 - Economia e gestione delle imprese
Federica Ceccotti	Under 40	SSD : SECS-P/08 - Economia e gestione delle imprese

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : FINANZA, MARKETING E PRODUZIONE
Titolo : I driver percettivi dell'atteggiamento verso la marca digitale. Un'indagine empirica
Autore/i : Vernuccio M., Ceccotti F., Barbarossa C., Giraldi A.
Anno : 2010
Numero volume : 4
Pagine da - a : 119-159
Issn : 1593-2230
Nome rivista o titolo libro o atti conferenza : The six senses, The essentials of Marketing, European Marketing Academy, COPENHAGEN
Titolo : Drivers of e-brand attitude. A structural modeling approach
Autore/i : Vernuccio M., Giraldi A., Barbarossa C., Ceccotti F.
Anno : 2010
Pagine da - a : 1-7

MACROAREA : F

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Dipartimento : Management e tecnologie

Metals in molluscs and algae: A North South Tyrrhenian Sea baseline

Metalli nei molluschi e nelle alghe: Impatto basale dal Nord al Sud del Mar Tirreno

We develop a 800km long relative baseline of metal pollution for the Tyrrhenian Sea, from the north of Naples to south of Sicily (Italy), based on spatio-temporal (1997-2004) concentrations of trace metals in marine organisms and on the bioaccumulative properties of those organisms. The study concerns
sites in the gulf of Gaeta-Formia, and three islands north, west, and south of Sicily: Ustica,Favignana and Linosa. The five metals are: cadmium, chromium, copper, lead, and zinc; the species include: Monodonta turbinata (n = 161), Patella caerulea (n = 244) and the algae Padina pavonica (n = 84).
We use Johnson's (1949)probabilistic method to determine the type of distribution that accounts for our data. It is a system of frequency curves that represents the transformation of the standard normal curves. We find an N-S pollution gradient in molluscs considered: the lowest metal pollution occurs
around the Sicilian islands. Our method can accurately characterize marine pollution by contributing to:policy-making, coastal resources management, the assessments of environmental damages from marine accidents, etc. The method is

a useful tool for pollution comparisons purposes among ecosystems (i.e. risk monitoring) and it is an ideal starting point for its application on a global scale.

Partner della ricerca

Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : JOURNAL OF HAZARDOUS MATERIALS
Titolo : Metals in Molluscs and Algae: a North-South Tyrrhenian Sea Baseline.
Autore/i : CONTI M. and FINOIA M.G
Anno : 2010
Numero volume : 181,
Pagine da - a : 388--392
Issn : 0304-3894
Nome rivista o titolo libro o atti conferenza : ARCHIVES OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY
Titolo : Baseline trace metals in seagrass, algae and molluscs in a southern Tyrrhenian ecosystem (Linosa Island, Sicily)
Autore/i : CONTI M. and BOCCA B and IACOBUCCI M and FINOIA M.G and MECOZZI M and PINO A and ALIMONTI A
Anno : 2010
Numero volume : 58,
Pagine da - a : 79--95
Issn : 0090-4341
Doi : 10.1007/S00244-009-9331-X
Nome rivista o titolo libro o atti conferenza : ENVIRONMENTAL RESEARCH
Titolo : A biomonitoring study: trace metals in algae and molluscs from Tyrrhenian coastal areas.
Autore/i : CONTI M. and G. CECCHETTI
Anno : 2003
Numero volume : 93,
Pagine da - a : 99--112
Issn : 0013-9351

MACROAREA : F

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Multiple and interlocking directorships in listed Italian financial intermediaries

Multiple e interlocking directorships negli intermediari finanziari quotati italiani

Corporate governance (CG) literature is particularly rich of studies which analyse the structural, organizational and functional characteristics of the board of directors [board] with intermediate or overall company performance. Starting from diverse theoretical perspectives, analyses tend to define the ideal configuration which would enable the board to effectively address its strategic and control role. One of the significant structural characteristics of the board is the presence of interlocking directorships (ID), i.e. connection between the boards of companies via the sharing of one or more board members.

We investigate the effects of ID on the management of problem loans considering the entire population of Italian listed banks in the three-year period (2006, 2007, 2008) - and control for the effects of the structural and organizational characteristics of the board and the bank¿s specific business characteristics. Our results show that horizontal and vertical ID are beneficial for the management of problem loan positions and in particular improve the recovery rate of the

bank¿s non-performing loan portfolio. This supports the information view, and the monitoring hypothesis and thus ultimately contributes to the understanding of the specific features of bank CG.

Altri partecipanti alla ricerca

Valeria Stefanelli	Under 40	SSD : SECS-P/11 - Economia degli intermediari finanziari

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : La corporate governance nell'esperienza nazionale e internazionale: Aspetti comparativi e profili evolutivi (a cura di F. Fortuna)
Titolo : Gli interlocking directorates nei Cda delle banche italiane quotate. Un'analisi emprica del controbuto nella gestione dei crediti problematici
Autore/i : M. Brogi, V. Stefanelli
Anno : 2010
Pagine da - a : 187-221
Isbn : 978-88-15-13918-4
Nome rivista o titolo libro o atti conferenza : PhD Program in Banking & Finance?
Alessandro Carretta and Gianluca Mattarocci Editors?
Titolo : Can interlocking directorates be good? Insight from problem loans in Italian listed banks
Autore/i : M. Brogi, V. Stefanelli
Anno : 2012

MACROAREA : F

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THE BANK-FIRM RELATIONSHIP IN THE LOCAL WORK SYSTEM OF CIVITAVECCHIA

LA RELAZIONE BANCA-IMPRESA NEL SISTEMA LOCALE DI LAVORO DI CIVITAVECCHIA

The recent changes in banking regulatory framework produced a renewed interest in the bank-firm relationship as one of the main factors to improve the development process on local and national level. The current market environment requires SMEs an extra effort to face new competitive challenges. Banks who really want to support business projects have to be able to interact with the changes affecting both the economic context on local and national level. The research aims to provide answers:
-What are the financial needs and constraints for SMEs? Which tipology of banks can better satisfy the needs of firms?
-What are the drivers to identify the "new" local bank? Do we still have to identify the local banks with the small ones?
Started from the literature review and social, economic and financial data base analysis, the aim of this work is to investigate the role and the new archetype of local banks in a specific area (Local Work System of Civitavecchia). This "vantagepoint" arises from socio-economic connections which may occur in the relations between all actors of the production system. The results confirm the important role of bank system to support the SMEs and shown the function and features of the new archetype of a local bank, that nowadays is not necessarly a small bank

Altri partecipanti alla ricerca

Paola Leone		SSD : SECS-P/11 - Economia degli intermediari finanziari
Pasqualina Porretta	Under 40	SSD : SECS-P/11 - Economia degli intermediari finanziari
Ida Claudia Panetta	Under 40	SSD : SECS-P/11 - Economia degli intermediari finanziari
Fabiomassimo Mango		SSD : SECS-P/11 - Economia degli intermediari finanziari
Fabrizio Santoboni	Under 40	SSD : SECS-P/11 - Economia degli intermediari finanziari

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Statistiche sulle Attività Culturali

Autore/i : M.C. TURCI

Anno : 2004

Pagine da - a : 1-223

Nome rivista o titolo libro o atti conferenza : GIORNATE DI STUDIO SULLA POPOLAZIONE in Padova.

Titolo : Interazione tra aggregati economici non virtuosi in Italia: Popolazione, Reddito e Consumo.

Autore/i : M.C. TURCI

Anno : 2005

Nome rivista o titolo libro o atti conferenza : ENCICLOPEDIA DEL NOVECENTO

Titolo : ECONOMIA DELLA CULTURA

Numero volume : XII - Supplemento III

Pagine da - a : 318-326

MACROAREA : F

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Dipartimento : Metodi e modelli per l'economia, il territorio e la finanza

Models for cost distributions in health economics

Modelli per la distribuzione dei costi in economia sanitaria

Cost data that arise in the evaluation of health care technologies usually exhibit highly skew, heavy-tailed and, possibly, multi-modal distributions. Distribution-free methods for analysing these data, such as the bootstrap, or those based on the asymptotic normality of sample means, may often lead to inefficient or misleading inferences. On the other hand, parametric models that fit the data equally well can produce different answers. In this research we have considered a Bayesian approach. In particular, Conigliani and Tancredi (2009, Health Economics), instead of choosing a single parametric model, specify a set of models for costs and estimate the mean cost with a weighted mean of its posterior expectations under each model, with weights given by the posterior model probabilities. The results are compared with those obtained with the semi-parametric approach proposed in Tancredi et al. (2006, Extremes), modelling cost data by a distribution composed of a piecewise constant density up to an unknown endpoint, and a generalized Pareto distribution for the tail. Finally note that a general review regarding Bayesian methods in health economics is given by Conigliani et al. (2010, Pharmacoeconomics, Italian Research Article)

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : PHARMACOECONOMICS, ITALIAN RESEARCH ARTICLES

Titolo : Il metodo bayesiano per le analisi decisionali in sanità

Autore/i : CONIGLIANI C and TANCREDI A. and MANCA A

Anno : 2010

Numero volume : 12,

Pagine da - a : 1--4

Issn : 1590-9158

Nome rivista o titolo libro o atti conferenza : HEALTH ECONOMICS

Titolo : A Bayesian model averaging approach for cost-effectiveness analysis in health economics

Autore/i : CONIGLIANI C and TANCREDI A.

Anno : 2009

Nome rivista o titolo libro o atti conferenza : PHARMACOECONOMICS, ITALIAN RESEARCH ARTICLES
Numero volume : 18,
Pagine da - a : 901--915
Issn : 1057-9230
Nome rivista o titolo libro o atti conferenza : EXTREMES
Titolo : Accounting for threshold uncertainty in extreme value estimation
Autore/i : TANCREDI A. and ANDERSON CW and O'HAGAN A
Anno : 2006
Numero volume : 9,
Pagine da - a : 87--106
Issn : 1386-1999

MACROAREA : F

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Decolonisation and Economic Development

From the Cassa per la Circolazione Monetaria della Somalia to the National Bank of Somalia. The role of Banca d'Italia (1947-1960)

Decolonizzazione e sviluppo economico. Dalla Cassa per la circolazione monetaria della Somalia alla Banca nazionale somala: il ruolo della Banca d'Italia (1947-1960)

This study fits into the area of research crucial aspects of the decolonisation of Somalia, in which the monetary question became one of the main, and in some ways decisive, transitional phases which occupied the Italian trust administration between 1950 and 1960. A number of very interesting points emerge from the detailed and analysis of sources in the Historical Archives of the B.I. The CCMS, and more generally, the events linked to the Banca d?Italia?s decision to promote the establishment of an independent Somali monetary system capable of encouraging and supporting the process of self-government, are not just indicative of the way in which Somali decolonisation took place, but also help to throw light on Italian monetary policy in the post-war period and on the management of relations with its main international competitors. The study explains how, in spite of the progress recorded in Somaliland, the final stages of Italy?s colonial administration amounted to a history of economic failure in the medium term. The reasons for this can be found in the situation prevailing in Somaliland, the characteristics of the mandate given to Italy by the UN and the political decisions taken both in Italy and internationally. The research clearly shows how a study of decolonisation and the ways in which it occurred in different African territories cannot be separated from an analysis of some aspects of the world economy?s reorganisation in the second half of the 20th century which has led to the globalisation of recent years

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : AFRICA
Titolo : Verso l'indipendenza? La federazione etiopico-eritrea nelle fonti dell'Archivio storico della Banca d'Italia (1952-1962)
Autore/i : Donatella Strangio
Anno : 2009
Numero volume : 1
Pagine da - a : 1-41
Issn : 0001-9747
Nome rivista o titolo libro o atti conferenza : Storia Economica
Titolo : Imprese italiane in Africa e sviluppo economico. Dalla federazione Etiopia-Eritrea alla guerra per l'indipendenza?

Nome rivista o titolo libro o atti conferenza : AFRICA
(1952-1975)
Autore/i : Donatella Strangio
Anno : 2009
Numero volume : 2-3
Pagine da - a : 255-283
Issn : 1824-5064
Nome rivista o titolo libro o atti conferenza : Imprenditorialità e sviluppo economico. Il caso italiano (secc. XIII-XX) cura di Franco Amatori e Andrea Colli.
Titolo : Imprese e colonie italiane. Eritrea (secc. XIX-XX).
Autore/i : Donatella Strangio
Anno : 2009
Pagine da - a : 1095-1120
Issn : 9-7888-23-8424-10
Isbn : 9-7888-23-8424-10

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The rejuvenation of population and the recovery of adults

Lo svecchiamento della popolazione e il recupero degli adulti

Ageing process, in Italy, is apparently recent. The actual scenario shows a decreasing share of younger age groups in the overall population, and the increasing share of elder age groups. The current age structure evolution, inevitable outcome of an effective birth and death control, leads Italy to be, by far, one of the oldest world countries.
It is self evident that population ageing poses major challenges to society, and, these challenges can only intensify in the next years. Accommodating policies to face up the multiple impacts of population ageing are urgently needed and should be multidimensional: labour market, social and health care, housing, education, social protection and pension schemes. Currently, in the Italian statistical system, a person is considered ?aged? if his age is over 65; however, the ?old population? reflects nowadays a heterogeneous universe of people and the characteristic related to ageing are always less associated to over 65 people. The traditional threshold based on the demographic age, does not answer to the changed needs. Taking into account the differences between the today?s and the past situations of the elderly, it would be probably more useful to consider the counter ageing of the population in terms of working population.

Altri partecipanti alla ricerca

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : La medicina estetica
Titolo : Lo svecchiamento della popolazione e il recupero degli adulti
Autore/i : Raimondo Cagiano de Azevedo e Cinzia Castagnaro
Anno : 2011
Numero volume : 2
Pagine da - a : p. 334-338
Issn : 0391-3619
Nome rivista o titolo libro o atti conferenza : The Turin conference on the new welfare, EUROPEAN PAPERS ON THE

Nome rivista o titolo libro o atti conferenza : La medicina estetica
NEW WELFARE, THE COUNTER-AGEING SOCIETY
Titolo : A Longer Life: Scenarios for a
A Longer Life: Scenarios for a Counter-ageing Revolution
Autore/i : Raimondo Cagiano de Azevedo e Cinzia Castagnaro
Anno : 2008
Numero volume : 9
Pagine da - a : 64-72
Issn : 1970-8947
Nome rivista o titolo libro o atti conferenza : ACTIVE AGEING AND COMBAT AGAINST AGE DISCRIMINATION, INVESTING IN YOUR FUTURE, INTERNATIONAL SEMINAR - ACTIVE AGEING 2
Titolo : Invecchiamento o svecchiamento? Scenari alternativi per l¿Italia e per l¿Europa
Autore/i : Raimondo Cagiano de Azevedo e Cinzia Castagnaro
Anno : 2008
Pagine da - a : 17-25

MACROAREA : F

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Statistical models for genetic and proteomic data analysis.

Modelli statistici per l'analisi di dati genetici e proteomici.

The statistical analysis of genetic data is one of the most active research fields in biostatistics: the development of technologies for high-throughput measurement of gene expression in biological system is providing massive information for investigating several biological issues. Substantial efforts have been recently made in order to develop appropriate statistical tools. In this project we focus on the analysis of gene expression data and on protein spectrum analysis investigating both methodological and application issues. We develop a Bayesian model which embeds the three main steps of the analysis of gene expression data: background correction, normalization and differentially expressed genes selection. The model is applied to data from the Mycobacterium tuberculosis project (MTB). However nowadays researchers are very interested in studying also gene prodcuts, that is proteins. Peptide Microarray Immunoassay enables researchers to map proteomic measurements, providing information regarding the relationship between antibody response and clinical sensitivity. We propose a Bayesian model which allows one to detect recognized peptides and bound epitope region in peptide microarray data. The proposed model is illustrated using data from a recent study about egg allergy.

Altri partecipanti alla ricerca

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Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Statistical Modelling
Titolo : Exploiting blank spots for model-based background correction in discovering genes with DNA array data
Autore/i : S. Arima, F. Mariani, B. Liseo and L. Tardella
Anno : 2011
Numero volume : 11
Pagine da - a : 89-114

Nome rivista o titolo libro o atti conferenza : Statistical Modelling
Issn : 1471-082X
Doi : 0.1177/1471082X1001100201
Nome rivista o titolo libro o atti conferenza : Biostatistics
Titolo : A Bayesian hierarchical model for identifying epitopes in peptide microarray data
Autore/i : S. Arima, J. Lin, V. Pecora, L. Tardella
Anno : 2011
Numero volume : First published online: August 18, 2011
Pagine da - a : 1-12
Issn : 1468-4357
Doi : 10.1093/biostatistics/kxr022
Nome rivista o titolo libro o atti conferenza : JOURNAL OF EXPERIMENTAL BOTANY
Titolo : Use of network analysis to capture key traits affecting tomato organoleptic quality
Autore/i : P. Carli. S. Arima, V. Fogliano , L. Tardella , A. Barone , L. Frusciante and M.R. Ercolano
Anno : 2009
Numero volume : 60(12)
Pagine da - a : 3379--3386
Issn : 0022-0957
Doi : 10.1093/jxb/erp177

MACROAREA : F

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Dictionary of art law

Dizionario giuridico dell'arte

Forget the boring monotony of most legal textbooks, and let yourself be seduced by a book ready guide you through the complicated world of artistic property law, but adroitly and not without a touch of irony. The information offered is up-to-date, as we would expect from this author, and will not seem so difficult after just a few pages. The format is a dictionary and includes a very useful system of elaborated cross references. There are a few more than 50 entries and yet the overall contents will be extremely useful to antique dealers, archaeologists, artists and their heirs, art consultants, collectors, curators, editors, galleries, sponsors, auction houses, museums, designers, fashion designers, fund raisers, restorers, art historians, press offices, or those who are simply curious or passionate about art. For this book offers them the legal advice about the art world which will allow them to make informed decisions. We might even say that this book is a sort of etiquette reference for art addicts. It includes anecdotes, curious facts, jokes, cases and strange examples from a world which is ever more global, more multi-millionaire, more glamorous; a world characterised by linguistic contamination. So it is no accident then that the author chose to reflect on everything which counts as art today: photography, installations, performances, design, video art, digital art, land art, as well as fashion, because as those who are involved know, the world of art, especially contemporary art, and the world of fashion are very close indeed. Though of course, she is also concerned with judicial questions relative to cultural heritage and archaeology, as the Italian context requires.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : Dizionario giuridico dell'arte
Autore/i : Silvia Segnalini

Nome rivista o titolo libro o atti conferenza : Dizionario giuridico dell'arte
Anno : 2010
Numero volume : 1
Pagine da - a : 1-272
Isbn : 978-88-572-0571-7

MACROAREA : F
GIUSEPPE MORBIDELLI
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Renewable Energy: constitutional protection, economic governance and environmental protection
Le energie rinnovabili come bene costituzionalmente tutelato, tra governance economica e tutela dell'ambiente (Unità di Roma - Sapienza)
The discipline of the renewable energy sector presents numerous and complex problematic aspects.
Firstly because it involves multiple and conflicting interests hardly reconciled with each other. In fact, while the energy is a factor of strategic importance for the country's economic development, and its supply, a service of general interest to be guaranteed over the entire territorionazionale other hand, procurement , production and distribution of energy affecting consumer protection, competition and needs
environmental.
Second, the fragmentation and overlapping of administrative and legislative powers between different levels of government land global community, national, regional and municipal authorities has resulted in a complex and diverse discipline problems with coordination between the various energy policies.
Moreover, the problem is to reconcile the requirements of a common market free and competitive energy goal of national energy policies and community with the need to safeguard the interests related to the necessary protection of social rights.

Altri partecipanti alla ricerca
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Università degli Studi di TERAMO Dipartimento di STUDI GIURIDICI,COMPARATI,INTERNAZIONALI ED EUROPEI

Pubblicazioni più significative relative alla ricerca
Nome rivista o titolo libro o atti conferenza : DIRITTO PUBBLICO COMPARATO ED EUROPEO
Titolo : La responsabilità extracontrattuale della Comunità e la gestione politica degli effetti delle norme convenzionali.
Autore/i : MONTELLA G.
Anno : 2006
Numero volume : II
Pagine da - a : p. 840-843
Issn : ISSN: 1720-4313
Nome rivista o titolo libro o atti conferenza : XV Congreso italo-español de profesores de derecho administrativo. Sevilla-Córdoba, 20-22 maggio 2004

Nome rivista o titolo libro o atti conferenza : DIRITTO PUBBLICO COMPARATO ED EUROPEO
Titolo : Energia, pianificazione del territorio, infrastrutture.
Autore/i : MORBIDELLI G.
Anno : 2006
Pagine da - a : 49-82
Nome rivista o titolo libro o atti conferenza : GLOSSAIRE DE DROIT / GLOSSARIO GIURIDICO.
Titolo : Glossario di diritto internazionale ed europeo
Autore/i : MONTELLA G.
Anno : 2010
Numero volume : 1
Pagine da - a : 1-128
Isbn : 9788895814353

MACROAREA : F

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Rock'n'roll, italian way. American propaganda and the modernization of an Italy changing to the rhythm of rock'n'roll(1954-1964).

Rock'n'roll, italian way. Propaganda americana e modernizzazione nell'Italia che cambia al ritmo del rock (1954-1964)

Rock'n'roll music landed in Italy in 1954 with the arrival of American marines at the Naples Afsouth (Allied Forces Southern Europe) Base, installed the same year in the Bagnoli Bay. Through the myriad of bars and nightclubs that gathered along the port area and in the city area of Campi Flegrei, the rhythms of music characterized by their Afro-American roots fascinated the middle class young people as well as the Neapolitan "scugnizzi". From here the contagion spread throughout the national territory thanks to the record company and indirectly to the movies that imported the American model. Through the diffusion of the new juke boxes, of the gleaming new cover of the 45 records rpm and of the coloured portable record-players, rock and roll became the soundtrack of "the great transformation" of the Italian Republic. This research concerns two aspects: 1. The use of jazz music as a propaganda instrument -a sort of cultural sonic weapon- for the United States government during the Cold War. 2. The Italian political class's necessity of controlling the effects of a sudden modernization expressed by the explosion of rock'n'roll music, considered a real threat. The threat, for the main political parties -Dc, Psi, Pci- was the laicization or secularization of the youth.

Pubblicazioni più significative relative alla ricerca

Nome rivista o titolo libro o atti conferenza : ROCK'N'ROLL, ITALIAN WAY. Propaganda americana e modernizzazione nell'Italia che cambia al ritmo del rock 1954-1964 (nuova edizione aggiornata) ?
Autore/i : M. MEROLLA, Anno : 2011, Isbn : 9788860632319
Nome rivista o titolo libro o atti conferenza : ROCK'N'ROLL, ITALIAN WAY. Propaganda americana e modernizzazione nell'Italia che cambia al ritmo del rock (1954-1964)
Autore/i : M.Merolla, Anno : 2009, Isbn : 9788860632319
Nome rivista o titolo libro o atti conferenza : New World Coming: The Sixties and the shaping of global consciousness.
Titolo : Rock'n'roll, Politics, and Society during the Italian Economic Boom
Autore/i : KAREN DUBINSKY, CATHERINE KRULL, SUSAN LORD, SEAN MILLS, SCOTT RUTHERFORD (eds.)
Anno : 2009, Pagine da - a : 187-195, Isbn : 9781897071519

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