

## **MASTER IN AVIATION INDUSTRY MANAGEMENT AND OPERATIONS (AvIMO)**

### **CURRICULA OF THE MEMBERS OF THE TEACHING SCIENTIFIC BOARD**

#### **Alessandro Corsini**

Professor of Fluid Machines at the Department of Mechanical and Aerospace Engineering of Sapienza University of Rome. PhD in Energetics since 1996, he is a Visiting Researcher at Rice University in Houston, USA and since 2018 he is an Extraordinary Professor at the Dept of Mechanical and Mechatronic Engineering, Stellenbosch University, South Africa. He contributed to setting up the research team for innovation in the field of machinery and energy systems, collaborating with industrial companies and primary research institutions (GE Oil&Gas, Ebara Europe Spa, Flakt Woods Ltd, Solyvent Flakt AB, Solyvent-Ventec, Howden, Faggiolati Pumps, ENI, ENEL I&R, ENEA, &c).

He has led and coordinated various energy and environmental planning activities and has published works on the topics of dynamic modeling of stand-alone power systems, on energy storage technologies and grid integration of renewable energy sources, and recently on the analysis methodologies of signal for condition monitoring, fault detection and diagnosis.

He is Associate Editor of the Journal of Power and Energy IMechE, and member of the Editorial Board of the following journals: International Journal of Rotating Machinery, Periodica Polytechnica. He has published more than 200 works, of which over 100 articles in international journals and also chapters in books. He has registered 9 international patents.

He was winner of the 2013 Donald Julius Groen Prize, Institution of Mechanical Engineering (IMechE) and 3 ASME IGTI Awards. Since 2012 he has been co-founder and President of SED Soluzioni per Energia e Diagnostica Srl, a spin-off of Sapienza University of Rome.

He was winner of the 2013 Donald Julius Groen Prize, Institution of Mechanical Engineering (IMechE) and 3 ASME IGTI Awards. Since 2012 he is co-founder and President of SED Soluzioni per Energia e Diagnostica Srl, a spin-off of Sapienza University of Rome. SED Soluzioni has been committed to the development of software and hardware for the diagnosis and control of energy systems.

Since 2022 he has been president of the Civil and Industrial Engineering Teaching Area, at the Sapienza branch office in Latina and president of OWEMES Association, dedicated to the promotion of the study and development of offshore wind power and marine energy in the Mediterranean area.

#### **Giuliano Coppotelli**

Giuliano Coppotelli has been Associate Professor at Sapienza University of Rome since 2015 in the Department of Mechanical and Aerospace Engineering. In 1996 he was appointed researcher at the Italian Aerospace Research Center (CIRA), in Caserta. Since 2000 he has been at the service of Sapienza as an Assistant Professor at the Faculty of Engineering, Department of Mechanical and Aerospace Engineering. From 2018 to 2023 he directed the 2nd level Master's Degree in Civil Aviation Management.

From 2000 to today he has taught various academic courses (field of aerospace structures, structures aerospace, aerospace technologies, experimental tests for aerospace structures, aeroelasticity) both in three-year degree course in Aerospace Engineering, and in the Master's Degree programmes in Aeronautical Engineering and Space and Astronautical Engineering of the Faculty of Civil and Industrial Engineering of the University of Rome "La Sapienza".

The main research topics concern the dynamics of structures, vibration control and aeroelasticity of the rotors. He is the author of numerous publications in international scientific journals and conference proceedings, and he is member of the editorial board of several international journals.

## **Tiziana D'Alfonso**

She is Associate Professor of Economic-Management Engineering at the Department of Computer, Automatic and Management Engineering "Antonio Ruberti", Sapienza University of Rome- She teaches the courses Economics of Technology and Management (Master's Degree programme in Mechanical Engineering), Airline operations and economics (Master's Degree programme in Aeronautical Engineering) and Industrial Organization (Master's Degree programme in Management Engineering). She is a member of the scientific teaching council of the Master in Local Public Transport Management at the same university. She is an Associate Fellow of the University of Manitoba Transport Institute and was a TEE (Transatlantic Partnership for Excellence in Engineering) Marie Curie Fellow at the Center for Transportation Studies at the Sauder School of Business, University of British Columbia. Over the years she has been a visiting professor at various universities, including Cornell Tech and The Hong Kong Polytechnic University. She conducts research about the topics of economics and regulation of network industries, as well as on transport economics and policy.

She is author of several internationally distributed publications.

Over the years, her research activities about the topics of air transport economics have received the best article award at the ATRS World Conference of the Air Transport Research Society, in 2021, Kobe (Japan) and at the ITEA World Conference of the International Transport Economics Association, in 2016, Santiago de Chile (Chile).

She carries out review activities for numerous scientific journals and holds various editorial roles, including associate editorship of the Journal of Air Transport Management. She is a member of the Scientific and Executive Committee of the International Transport Economics Association.

She has collaborated with various public institutions and companies, including the Ministry of Infrastructure and Transport, Enac, AirlItaly, various mobility agencies. She was scientific director and participated as a researcher in numerous European and national research projects funded by public and private organizations, including the European Union, the Ministry of Education, University and Research, the Ministry of Infrastructure and of Sustainable Mobility, the Italian Naval Register, the National Communications Foundation, ISFORT - Higher Institute of Training and Research for Transport.

## **Guido De Matteis**

He has been Full Professor of Flight Mechanics at Sapienza University of Rome at the Department of Mechanical and Aerospace Engineering since 1998. He holds courses in Flight Dynamics and Helicopter Flight Mechanics in the Master's Degree programme in Aeronautical Engineering.

He was President of the Aerospace Engineering teaching area council (2010-2019) and representative of the Faculty of Civil and Industrial Engineering in the Teaching Quality and Innovation Working Group (Gdl QuID). His main areas of study are in the dynamics and control of aircraft, launchers and space systems. In the field of aircraft dynamics and control he has been involved in the analysis of fixed and rotary wing aircraft operations, in the dynamic analysis of advanced aircraft and in the aero-mechanical study of innovative configurations. He is author or co-author of over 120 publications in international journals and conference proceedings.

He is responsible for the activities of the Flight Dynamics Laboratory of the Department of Mechanical and Aerospace Engineering, which is equipped for prototyping control systems and for real-time, hardware-in-the-loop simulation.

Among his main institutional assignments, he was head of the Italian delegation in GARTEUR (Group for Aeronautical Research and Technology in Europe), National Representative in the National States Representative Group for 'Clean Sky' JTI, national delegate in the Programme Committee, thematic priority 'Transport (including Aeronautics)', Seventh Framework Programme, member of the Scientific Advisory Board of CIRA, co-chairman of the National Platform for Aeronautics Research ACARE-IT, and national

representative in ACARE (Advisory Council for Aeronautics Research in Europe) and GARTEUR (Group for Aeronautical Research and Technology in Europe).

### **Giulio Di Gravio**

Professor of Mechanical Industrial Systems at the Department of Mechanical and Aerospace Engineering of the Sapienza University of Rome. He is Coordinator of the Doctorate in Industrial and Management Engineering at the same department, with many years of experience in teaching and scientific co-ordination of University Masters and Executive Masters.

He has collaborated with various public institutions and companies, national and international, including INAIL, ENEA, Confindustria, Retimpresa, Fondimpresa, Italferr, Poste Italiane, ATAC, BNL-BNP Paribas, Barclays, Banca d'Italia, Qantas Engineering, Consulta.

He was the scientific director (principal investigator) of the Sapienza operational unit within the INAIL-BRIC and MISE-Industria 2015 national projects, as well as the European Erasmus + project "Working Smart". He has participated as a researcher (investigator) in numerous European and national research projects funded by public and private organizations. He is a founding member of the academic spin-off aiComply s.r.l., active since 2008 in Governance, Risk & Compliance Management services to support digital transformation.

He conducts research in the field of Industrial Engineering, with a focus on analysis and evaluation of company performance, supply chain management and business strategies, simulation tools and expert systems to support production, maintenance and logistics, the analysis of financial systems for the evaluation of industrial investments, integrated approaches to compliance & risk management and resilience engineering. He is the author of over 200 publications mainly distributed internationally.

### **Annalisa Fregolent**

Professor in the scientific-disciplinary field (SSD) ING-IND/13 (Applied machine mechanics) at the Department of Mechanical and Aerospace Engineering of the Sapienza University of Rome.

Lecturer in Applied Mechanics in the Aerospace Engineering Bachelor's Degree and in Vibration and Noise Control in the Mechanical Engineering and Aeronautical Engineering Master's Degrees.

Her research activity focuses on structural dynamics, particularly about the dynamic analysis of mechanical systems, dynamic identification, modal analysis, high and medium frequency vibroacoustic problems, vibration and noise control, and tribological problems studied through the dynamics of contact phenomena. She is the author of more than 100 publications with international circulation and reviewer for leading international journals in the field. She is the scientific director of numerous projects including the BRIC-INAIL 2016 2019 2022 projects relating to control systems for reducing workers' exposure to noise and vibrations.

For the Municipality of Fiumicino she carried out experimental research for the 'Evaluation of the acoustic impact of Leonardo da Vinci Airport on sensitive receptors of the Municipality of Fiumicino'.

She is Director of the Advanced Training Course in 'Integrated risk management from physical agents in the workplace and new ergonomic technologies for prevention' in collaboration with INAIL.

### **Paolo Gaudenzi**

Professor of Aerospace Structures since 2000 at the Department of Mechanical and Aerospace Engineering of the Sapienza University of Rome. He was Director of the Department of Mechanical and Aerospace Engineering and also Director of the 2nd level Master in Satellites and Platforms and member of the Academic Senate. He was a founder member of Faculty Fellow at the Skolkovo Institute of Science and Technology in Moscow and was coordinator of the PhD in Aeronautical and Space Engineering. He was President of Smart Structures Solutions srl, a start-up for the development of monitoring of structural

systems. He is author of over 120 works published in international journals, and author of the research book *Smart Structures*, J. Wiley 2009.

His main research topics concern aerospace structures, space systems, concurrent engineering and multidisciplinary methods for engineering design.

He was responsible for research projects funded by the Italian Ministry of Research, the National Research Council, the Lazio Region, the Italian Space Agency (ASI), the European Space Agency (ESA), the European Union Framework Programme. He is an expert in the evaluation of research projects for the Ministry of Education, University and Research, the Ministry of Industrial Development, the European Research Council, the Regions of Lazio, Toscana, Veneto, Piemonte and Puglia.

He was editor for the *Journal Aerotecnica*, *Missili e Spazio*, and for the *Journal of Aerospace Science, Technology and System*, and associate editor of the *Int. Journal of Intelligent Material Systems and Structures* and of the *IEEE Trans on Aerospace and Electronic systems*, and member of the international board of the *CEAS Space Journal* and *CEAS Aeronautical Journal* and of the international editorial board of the *Journal Computers and Structures*.

Since 2023 he holds the position of Scientific Attaché at the General Consulate of Italy in Boston.

### **Riccardo Malpica Galassi**

He is a Tenure Track Assistant Professor (RTDb) at the Department of Mechanical and Aerospace Engineering of the Sapienza University of Rome and co-teacher of the Aeronautical Engines course provided in the Master's degree course in Aeronautical Engineering.

He conducts research on aerospace propulsion, with particular attention on sustainable propulsion (innovative propulsion architectures), numerical modeling of reactive flows and innovative fuels, and digital twins. He obtained his doctorate in Aerospace Engineering at Sapienza University in 2018 and then spent two years at the Department of Aero-thermo-mechanics at the Université Libre de Bruxelles as Post-doc Marie Curie Researcher as head of the research project "PREdict - Pollution Reduction Design for Innovative Combustion Technologies".

He participates in the CN4 National Center (sustainable mobility), Spoke 1 (Air Mobility), WP5 Multidisciplinary design optimization of innovative solutions for next generation green aircraft and in the CN1 National Center (HPC, Big Data & Quantum Computing), Spoke 6 (Multiscale modeling & Engineering Applications), WP4 Green Energy.

He regularly collaborates with AVIO S.p.A and has numerous research collaborations with Sandia National Laboratories (California, USA), Université Libre de Bruxelles, King Abdullah University of Science and Technology (KAUST, Saudi Arabia), University of Notre Dame (Illinois, USA).

He is a member of the Combustion Institute and Management Committee Member of the COST Action CYPHER (Cyber-Physical systems and digital twins for the decarbonisation of energy-intensive industries).

### **Franco Mastroddi**

Professor in Aerospace Structures at the Department of Mechanical and Aerospace Engineering of the Sapienza University of Rome. He is President of the Teaching Area Council in Aerospace Engineering and involved in teaching activity in the Bachelor's Degree in Aerospace Engineering and the Master's Degree in Aeronautical Engineering with teaching assignments for the courses of Aeronautical Construction, Analysis and multidisciplinary project of aircraft, Aeronautical structures and Aeroelasticity.

He conducts research in the fields of aero-servoelasticity, nonlinear dynamic systems, structural dynamics and optimisation, identification of aeroelastic systems, and integrated multidisciplinary aircraft optimisation. He is author and co-author of several papers presented at international conferences and published in international journals. For many of these journals, such as *Journal of Sounds and Vibration*, *Journal of Fluids and Structures*, *AIAA Journal*, *AIAA Journal of Spacecraft and Rockets*, *Computers and*

Structures, CEAS Aeronautical Journal, CEAS Space Journal, Journal of Aerospace Science and Technology, Journal of Mechanical Systems and Signal Processing, he serves as referee and editor. In the last decade he has been involved as principal researcher in national and European research and development projects (H2020) and collaborations with AVIO S.p.A., the European Space Agency and AIRBUS Operation, National Center 4 for Sustainable Mobility (PNRR, Spoke 1 Air Mobility).

### **Fabio Nonino**

Professor of Project Management (Economic-Management Engineering) at the “Antonio Ruberti” Department of Computer, Automatic and Management Engineering of the Sapienza University of Rome. He is the Director of the advanced training courses in Project, Portfolio and Program management, Project Management for sole project managers and Agile Project Management Foundation organized by Sapienza also in collaboration with the Project Management Institute. He has numerous experiences as a scientific coordinator and member of scientific committees of University Masters and Executive Masters. He is a member of the Faculty of the CUOA Business School and of the Higher Police School and Director of an Advanced Training Course for the Major Defense General. He has collaborated with various public institutions and companies, including the General Command of the Harbor Offices, the Ministry of Agricultural, Food, Forestry and Tourism Policies, CNA, Aprilia Piaggio Group, Febal, Finmeccanica, illycaffè, Permasteelisa Group, Poste Italiane and Italferr . He was the scientific director (principal investigator) of the Sapienza operational unit regarding the European Collective projects of FP7 and PMBoG (Erasmus+) and participated as a researcher (investigator) in numerous European and national research projects financed by public and private organizations. He is a founding member of an academic spin-off active since 2008 in the management training market using business games. Since 2011 he has been a member of the operational nucleus of the Committee for the development of Scientific and Technological Culture established by the Ministry of Education, University and Research. He conducts research in the field of Management Engineering, focusing on areas such as Operations and Service Management, Innovation and Project Management and Organisational Behaviour and Development. He is the author of more than 140 publications, mainly with international circulation, of the books "Additive Manufacturing - Enhancing Business Value" (Springer) and "The Road to Servitization - How Product Service Systems Can Disrupt Companies' Business Models" (Springer) and of the book "La Guida del Sole 24 Ore al Project Management".

### **Riccardo Patriarca**

Riccardo Patriarca is a Tenure Track Assistant Professor (RTDb) at the Sapienza Department of Mechanical and Aerospace Engineering (DIMA). He holds a National Qualification as Associate Professor in Industrial Systems Engineering since 2018. Currently, he serves as the chair holder of the course “Aviation Regulations and Safety Management” for the MSc in Aeronautical Engineering, and “Operations Management” for the MSc in Mechanical Engineering at Sapienza. He has authored over 130 manuscripts in academic journals and conference proceedings. His research interests span various topics related to risk, resilience, business, and operations management. He holds positions in the editorial boards of renowned journals such as Safety Science (Elsevier), Reliability Engineering and System Safety (Elsevier), Cogent Engineering (Taylor & Francis), and International Journal of Business Intelligence Research (IGI Global). He has been involved in several significant projects. Notably, he coordinates the research collaboration between Sapienza DIMA and Eurocontrol since 2021. He also served as the coordinator in 2018 for the research funded by Qantas Engineering in Australia. Currently, he is the Principal Investigator for research funded by INAIL (BRIC 2022) RE-SET on the utilization of system-theoretic modeling and knowledge graphs

to address issues in energy transitions, as well as the PRIN 2022 project RESIST focusing on the impact of cyber-socio-technical issues on industrial assets.

He actively contributes to the DIMA spin-off, Governance Risk and Compliance aiComply s.r.l.

His research has earned him several awards, including the Royal Aeronautical Society Young Person Award in 2017, the Premio Italia Giovane in 2019, and recognition as one of Forbes 30 under 30 in Europe in the category of "science and healthcare" in 2019. He was also honored with the title of one of Italy's 100 young leaders of the future in 2019, being one of the top five in the category of "science" by Forbes Italia.

### **Giampaolo Romano**

Professor since 2005 at the Faculty of Engineering of Sapienza University of Rome in the scientific-disciplinary field (SSD) ING-IND/06 (Fluid Dynamics). He belongs to the Department of Mechanical and Aerospace Engineering. He was President of the Teaching Area Council in Power Engineering from 2012 to 2019 and responsible for the Erasmus mobility programme for the Faculty of Engineering. Since 2022, he has been the coordinator of the Board of Lecturers of the Doctorate in Theoretical and Applied Mechanics. He has published around 200 scientific works in international and national journals or presented them at international and national conferences. He is a member of the Editorial Advisory Board and reviewer of the journal Experiments in Fluids and reviewer for the journals Europhysics Letters, Journal of Visualization, Experimental Thermal and Fluid Science, European Journal of Mechanics, Measurement Science and Technology, Flow Turbulence and Combustion, Ocean Engineering, l'Aerotecnica, and Acta Mechanica.