



# Curriculum Vitæ of Shahram Rahatlou

## Personal Information

Email [shahram.Rahatlou@uniroma1.it](mailto:shahram.Rahatlou@uniroma1.it)  
Homepage <http://www.roma1.infn.it/people/rahatlou/>

## Education

**PhD in Physics**, dissertation on “Observation of Matter—Anti-matter asymmetry in the  $B_0$  meson system”, October 2002, University of California, San Diego

**Laurea in Fisica** (110/110 cum laude), February 1998, Sapienza Università di Roma.  
thesis title: “Simulazione della camera a deriva centrale dell’esperimento BaBar”

## Appointments

**Full Professor, Sapienza Università di Roma**, 4/11/2019 - present

**Associate Professor, Sapienza Università di Roma**, 1/3/2008 - 3/11/2019

**CERN Scientific Associate**, 1/3/2017 - 29/2/2018

**CERN-INFN Fellow**, 1/3/2011 - 31/7/2011

**CERN-INFN Fellow**, 1/3.2010 - 30/9/2010

**Assistant Professor, Sapienza Università di Roma**, 1/1/2005 - 28/2/2008

Professore a contratto with “Rientro dei Cervelli” fellowship

**Postdoctoral Research Assistant, University of California, San Diego**, 1/12/2002 - 31/12/2004

**Graduate Research Assistant, University of California, San Diego**, 1998-2002

## Abilitazioni

**Abilitazione scientifica Nazionale tornata 2013, settore 02/A1**, 28/11/2014

**Abilitazione scientifica Nazionale tornata 2012, settore 02/A1**, 23/01/2014

## Awards

**2004 Mitsuyoshi Tanaka award** of the American Physical Society for the best dissertation in Experimental Particle Physics in the United States ( <http://bit.ly/tanaka2004> )

## Scientific and society memberships

2005 - present CERN (European Laboratory for Particle Physics), scientific associate

2003 - 2004 Fermilab (Fermi National Accelerator Laboratory), scientific associate

1998 - 2004 SLAC (Stanford Linear Accelerator Center), scientific associate

## Commissions of Trust

2018 Referee for Ministero dell’Istruzione dell’Università della Ricerca (MIUR) for PRIN 2017

2015 - 2018 Scientific referee for the Swiss National Science Foundation (SNF)

2018 Referee for fellowships at Swiss Federal Institute of Technology Zurich (ETHZ)

2018 Scientific referee for the Belgium Fund for Scientific Research (FNRS)

2018 Scientific referee for the Netherlands Organisation for Scientific Research (NWO)



2017-2018	Scientific referee for the Australian Research Council (ARC)
2017	Scientific referee for the Hong Kong Research Grants Council (HKGRC)
2016 - 2017	Member of Commissione di Ricerca Sapienza for Faculty of Science Faculty (Macroarea A) in charge of selection and assignment of research grants at Sapienza
2016	Referee for Agenzia Nazionale per la Valutazione del sistema Universitario e della Ricerca (ANVUR) for the VQR 2011-2014 campaign
2015 - 2017	Chair of the <i>Commissione di Assegni di Ricerca</i> (Postdoctoral fellowship selection committee) of Laboratori Nazionali di Gran Sasso
2015	Scientific referee for the <i>Scientific Independence of young Researchers (SIR)</i> program of Ministero dell'Istruzione, dell'Università e della Ricerca
2014 - 2016	Member of the Collaboration Board Advisory Committee of the CMS experiment at CERN
2014 - 2016	Scientific Referee for the SHIP experiment proposal in Commissione Scientifica Nazionale 1 of INFN. SHIP is a beam-dump experiment for an estimated cost of 60 MCHF for the detector and 100 MCHF for the beam facility to be built at CERN
2010 - present	Referee for Physics Letters B Journal (PLB)
2010 - present	Referee for Journal of High Energy Physics (JHEP)

## Scientific and Research Coordination Responsibilities

Nov 2018 - present	Coordinator of CMS Tier 2 Computing facility at Sapienza
2016 - 2018	Physics coordinator of CMS experiment at CERN
2017 - 2019	Member of ECoM2x committee of CMS experiment at CERN to devise computing model and needs for High-Luminosity LHC phase
2016-2018	Member of Management Board of CMS experiment at CERN
2016-2018	Member of Executive board of CMS experiment at CERN
2016 - 2018	Chair of the Physics Office of CMS experiment at CERN
2016 - 2018	Member of Phase-II Upgrade Steering Group of CMS experiment at CERN
2014 - 2016	Convener of the "Beyond Standard Model" working group of the "What Next?" effort at INFN. Co-editor of white paper on long-term strategy of Commissione Scientifica Nazionale 1
2013 - 2016	Team leader of CMS group in Rome, with an annual budget of €250-300k euro
2013- present	Chair of several internal CMS review committees, including search for dark matter candidates in events with single lepton and missing transverse energy, and events with single boosted-top and missing transverse energy
2013	Coordinator of SUSY Montecarlo working group in CMS (~20 physicists). Group acting as a liaison between theorists and analysis groups to provide the correctly generated samples (Management Level 3)



2011 - 2012	Convener of Exotica Physics Analysis Group of CMS (~400 physicists). The largest physics group in CMS counting hundreds of members and covering a wide spectrum of searches for direct new physics signatures, excluding supersymmetry. (Management Level 2)
2009-2012	Coordinator of Physics Activities of CMS-Italia Collaboration. Italy represents 12% of the whole CMS collaboration and is extremely active in physics analysis. During my tenure I helped fostering collaborations between the smaller groups and direct some of the efforts towards searches for new physics.
2007-2009	Coordinator of global event reconstruction of the CMS experiment (~100 physicists) during the preparation for the first LHC collisions in 2008 (Management Level 2)
2006	Coordinator of electron and photon reconstruction in CMS (Management Level 3)
2004	Coordinator of the BABAR event reconstruction (Management Level 2)
2000-2001	Operation manager of the BABAR online data acquisition system

### Organisation of Scientific Conferences and Workshops

2018	co-Chair of program committee of LHCP 2019 international conference in Puebla, Mexico May 2019
2017	Program committee of LHCP 2018 international conference in Bologna, Italy in June 2018
2016	Program committee of LHCP 2017 international conference in Shanghai, China in May 2017
2015	Organising committee of TOP2015 conference, Ischia, Italy
2015	Organising committee of "101-esimo Congresso della Societa` Italiana di Fisica", Rome, Italy
2013	International Advisory committee of Second IPM meeting on LHC Physics, Tehran, Iran
2013	Organising committee of ATLAS/CMS/LHC physics workshop in Genova, Italy
2013	International Advisory committee of "Aspen Higgs Quo Vadis", 10-16 March 2013 Aspen Center for Physics
2012	Organiser of CMS Exotica Workshop in Rome
2011	Organiser of CMS Exotica Workshop in Rome (Both scientific program and local organisation)
2010	Chair of the local organising committee of Incontri Italiani di Fisica di Alte Energie (IFAE) 2010
2005	International organizing committee for the third international workshop on CKM physics



## Outreach and third mission

2018-2019 Tutor at Liceo Scientifico Augusto Righi, Roma for the Art & Science project. This project is aimed at scientific outreach at high school level across Italy, using art for scientific communication. Details at <https://web.infn.it/artandscience/>

2018-2019 Tutor at Liceo scientifico Giulia Falletti di Barolo, Roma for the LAB2GO project. This project aims at archiving and documentation of physics experiences at laboratories across high schools in Rome. Details available at <https://web.infn.it/lab2go/>

2015 Invited public lecture on `Search for Dark Matter` at an event for the 100th anniversary of General Relativity at Università di Milano Bicocca, Milan

## Invited Plenary Talks and Convensership

Moriond Electroweak 2019,  
La Thuile, March 2019 Experimental Summary

ICHEP 2018,  
Seoul, Korea, July 2018 Highlights from CMS and LHCb experiments

RDMS 2018,  
Tashkent, Uzbekistan, Sep 2018 Highlights and prospects of physics at CMS experiment

SUSY 2016,  
Melbourne, Australia, July 2016 Overview of BSM searches ATLAS and CMS detectors at LHC

What Next?,  
Angelicum, Roma, Italia, 2014 Report of the Beyond Standard Model Working Group

EPS High Energy Conference 2013,  
Stockholm, Sweden Convener of the "Higgs & New Physics" session. Selection of submitted contributions and chairing of three days of parallel sessions

ICHEP 2012,  
Melbourne, Australia, July 2012 Convener of the "Beyond Standard Model" session. Selection of submitted contributions and chairing of three days of parallel sessions

Physics in Collision,  
Vancouver, August 2011 Status of exotic searches at LHC and Tevatron

Hadron Collider Physics Symposium,  
La Biodola, Italy, May 2007 Perspectives for New Physics Searches at 14 TeV

FPCP 2002,  
Philadelphia, PA, May 2002 Measurement of  $\sin 2\beta$  from BABAR

## Selected seminars and colloquia

University of Belgrade,  
Belgrade, Serbia, December 2017 Trigger needs for CMS experiment in Run2 and beyond

Piacenza, CMS Italia,  
November 2017 Physics status and outlook with CMS detector



Ghent University, Belgium  
April 2017

Status and prospects of physics with CMS detector

University of Zurich,  
December 2016

Physics prospects with CMS detector with Run2 data

University of Melbourne, Australia  
December 2015

Search for New Phenomena at the Energy Frontier

100 years of General Relativity, Università di  
Milano Bicocca, Milan, November 2015

Search for Dark Matter

Università di Padova, April 2013

Physics at the Large Hadron Collider

DESY, Hamburg, May 2012

Status of exotic searches at LHC

University of Barcelona, May 2012

Status of exotic searches at LHC

Sapienza, Rome, September 2011

Status of exotic searches at LHC

CERN, Geneva, 2005

Measurements of CKM angle  $\gamma$  at BaBar

MIT, Boston, October 2004

Measurement of CP-violating asymmetry  $\sin 2\beta$

Iowa State University, Ames, October 2004

Measurement of CP-violating asymmetry  $\sin 2\beta$

Caltech, Pasadena, April 2002

Measurement of CP-violating asymmetry  $\sin 2\beta$

UC San Diego, September 2001

Measurement of CP-violating asymmetry  $\sin 2\beta$



## Teaching Experience

### Undergraduate

Activities and syllabus available at <http://www.roma1.infn.it/people/rahatlou/didattica.php>

2018-2020	Fisica Nucleare and Subnucleare I (III anno, Laurea Triennale Fisica) Average 80 students (6 CFU)
2018-2020	Computing Methods for Physics (I anno, Laurea Magistrale) Average 80 students (6 CFU)
2015 - 2016	Elettromagnetismo (II anno, Laurea Triennale Fisica). Average 70 students (12 CFU)
2010 - 2016	Elementary Particle Physics (II anno, Laurea Magistrale). average 10 students (6 CFU)
2009 - 2016	Laboratorio di Calcolo (I anno, Laurea Triennale). average 80 students (6 CFU + 3 CFU for Abilità Informatiche)
2008 - 2009	Fisica Generale per Biologia(I anno, Laurea Triennale). 100 students (9 CFU)
2006 - 2009	Programmazione++ (III anno, Laurea Triennale). 10 students (6 CFU)
2005 - 2009	co-instructor of course of "Laboratorio di Fisica Nucleare e Subnucleare" (I anno, Laurea Magistrale). 30 students
1999	Teaching assistant at UC San Diego for course of Electromagnetism for undergraduate majors in Physics. 100 students

### Lectures at graduate and summer schools

2019 Jan	Physics at CMS and prospects for High Luminosity LHC CMS Data Analysis School, Pisa
2019 Jan	Challenges and prospects for physics at High Luminosity LHC CMS Data Analysis School, Fermilab
2016 Aug	Search for exotic and new phenomena at Large Hadron Collider PSI Summer school on "Exothiggs", Zuoz Lyceum Alpinum, Switzerland
2014 June	Search for exotic phenomena at Large Hadron Collider Scuola di Fisica di Otranto, Italy