

INFN, Florence
Via Sansone 1 Sesto Fiorentino
50019 Firenze (IT)

Email: michele.redi@fi.infn.it
Nationality: Italian

Brief Biography:

I was born in Florence, Italy on August 11 1976. After my undergraduate studies at the University of Florence I moved to the United States, first in Baltimore for my Ph.D at Johns Hopkins University and then in New York at New York University where I did my first post-doc. I then came back to Europe to work in Switzerland for 5 years between Lausanne and Geneva. I presently live and work in Florence and often visit the CERN theory division in Geneva.

Education:

May 2004 Ph.D in theoretical Physics. Johns Hopkins University, Baltimore (USA). Thesis: "Effective field theories of warped extra-dimensions". Advisor: Prof. J. A. Bagger.
May 2002 Master of Arts. Johns Hopkins University
April 2000 B.S. in Physics. Florence University, IT (110/110, summa cum laude).
Thesis: "Search of new resonances at LHC". Advisor: Roberto Casalbuoni.
1990 - 1995 Liceo Scientifico "Gramsci", Firenze, Italy. Scientific Lyceum Diploma, score: 60/60

Professional Experience:

2011 - present Researcher, INFN Firenze.
2009 - 2012 Postdoctoral Fellow, CERN, Geneva (CH).
2007 - 2009 Postdoctoral Fellow, EPFL, Lausanne (CH).
2004 - 2007 Postdoctoral Fellow, NYU, New York.

Teaching Experience:

2019 Theories of the Early Universe at Florence U.
2018 Axions (Ph.D. Course)
2015 - present Quantum Field Theory course at the Florence U.
2011- present Thesis Advisor at Florence U. (IT). Students: Andrea Tesi (Simplified Model of Higgs Goldstone Boson), Elena Vigiani (Non Minimal Terms in models with Higgs Goldstone Boson), Carlotta Sacco (Dipoles in models with Higgs Goldstone boson), Andrea Mitridate (Aspects of Composite Dark Matter), Mattia Crescioli (Precision tests with partially composite Higgs).
2008 - 2009 Master thesis advisor at EPFL, Lausanne (CH). Students: Diego Becciolini (Deconstruction of a 5D model of hadrons).
2007 - 2008 Teaching Assistant at EPFL (classical and quantum field theory, group theory).
2000 - 2003 Teaching Assistant for General and Classical Physics at Johns Hopkins University.

Professional Activities:

Referee for Physical Review D, JHEP, Physics Letters B, Physics Review Letters
Organizer of the GGI school on phenomenology of elementary particles (2014-present, Florence)
Organizer of ICTP conference on "Frontiers of New Physics: Colliders and Beyond" (2014, Trieste)
Organizer of GGI workshop "Gearing up for LHC 13" (2015, Florence)
Organizer of John Hopkins Workshop "Beyond the SM: where do we go from here?" (2018, Florence)
Convener for Beyond the SM of ICHEP 2018 (Seoul) and SUSY 2018 (Barcelona)

Grants:

2012 - 2017 MIUR-FIRB grant RBFR12H1MW for junior investigators. Post-docs hired: Oleg Antipin, Diego Becciolini, Juri Smirnov.

Research Interests:

I work in the field of theoretical particle physics. I am broadly interested in all aspects of physics beyond the SM in particle physics and in cosmology. Since my Ph.D. I worked in several different fields, ranging from extra-dimensions, CFTs, supersymmetry, modifications of gravity and cosmology. Recently my main interest has been phenomenology but I keep interests into more formal subjects such as CFTs and gravity. During the years 2008-2016 I mostly worked on extensions of the SM that can be tested at the Large Hadron Collider in Geneva. I am presently working on dark matter and strongly coupled extensions of the SM.

Main papers:

A.-Mitridate, M.-Redi, J.-Smirnov and A.-Strumia, "Cosmological Implications of Dark Matter Bound States," arXiv:1702.01141 [hep-ph].
R.-Franceschini et al., "What is the $\gamma\gamma$ resonance at 750 GeV?," JHEP 1603, 144 (2016) [arXiv:1512.04933 [hep-ph]].
O.-Antipin, M.-Redi, A.-Strumia and E.-Vigiani, "Accidental Composite Dark Matter," JHEP 1507, 039 (2015), [arXiv:1503.08749 [hep-ph]].
O. Antipin, M. Redi and A. Strumia, "Dynamical generation of the weak and Dark Matter scales from strong interactions," JHEP 1501, 157 (2015) [arXiv:1410.1817 [hep-ph]].
M. Redi and A. Strumia, "Axion-Higgs Unification," JHEP 1211, 103 (2012) [arXiv:1208.6013].
S. De Curtis, M. Redi and A. Tesi, "The 4D Composite Higgs," JHEP 1204, 042 (2012) [arXiv:1110.1613].
M. Redi and A. Weiler, "Flavor and CP Invariant Composite Higgs Models," JHEP 1111, 108 (2011) [arXiv:1106.6357 [hep-ph]].
B. Grinstein, M. Redi and G. Villadoro, "Low Scale Flavor Gauge Symmetries," JHEP 1011, 067 (2010) [arXiv:1009.2049 [hep-ph]].
R. Rattazzi and M. Redi, "Gauge Boson Mass Generation in AdS₄," JHEP 0912, 025 (2009) [arXiv:0908.4150].
D. Becciolini, M. Redi and A. Wulzer, "AdS/QCD: The Relevance of the Geometry," JHEP 1001, 074 (2010) [arXiv:0906.4562].
C. de Rham, G. Dvali, S. Hofmann, J. Khoury, O. Pujolas, M. Redi and A. J. Tolley, "Cascading gravity: Extending the Dvali-Gabadadze-Porrati model to higher dimension," Phys. Rev. Lett. 100, 251603 (2008) [arXiv:0711.2072].
G. Dvali and M. Redi, "Black Hole Bound on the Number of Species and Quantum Gravity at LHC," Phys. Rev. D 77, 045027 (2008) [arXiv:0710.4344].

The complete list of my publications can be found at <http://inspirehep.net/> searching "a redi, m."

Selected Talks:

Pascos, DESY Hamburg (2009): "Large Number of Species"
Planck, CERN (2010): "Partially Supersymmetric Composite Higgs Models"
CERN Colloquium (2010): "Composite Higgs Models: The past the and the future"
SISSA, Trieste (2011): "Flavor Gauge Symmetries"
Interpreting LHC Discoveries, GGI Florence (2011): "Flavor vs. LHC in Composite Higgs Models"
Strongly coupled physics beyond the Standard Model, ICTP Trieste (2012): "The 4D Composite Higgs"
ICHEP, Melbourne (2012): "Implications of 125 GeV Higgs in Composite Models"
KEK, Japan (2013): "Composite Higgs Models in the LHC Era"
IPMU, Japan (2013): "Axion-Higgs Unification"
ICTP Sao Paulo (2013): "Particle Physics After LHC8"
NPKI, Jeju Korea (2014): "Dark Matter and the Fermi Scale from Strong Interactions"
MIAPP, Munich (2015): "Accidental Composite Dark Matter"
LHCP, Lund (2016): "What is the $\gamma\gamma$ resonance at 750 GeV?"
Johns Hopkins, Budapest (2017): "Baryonic Dark Matter"
CERN Institute (2018): "Bound States of Dark Matter"

Invited Lectures:

Extra-Dimensions, Compositeness and the LHC, ICTP Trieste (2013).
Course on Composite Higgs Models, ICTP Sao Paulo (2013).

Michael Redi

Alice Bernamonti

Curriculum Vitae

University of Florence - Department of Physics
V. Sansone 1, 50019 Sesto Fiorentino (FI) Italy
☎ +39-055-457-2301
✉ alice.bernamonti@unifi.it
🌐 florencestringtheorygroup

Personal information

Born Milano, Italy
Nationality Italian, Belgian
Languages Italian (mothertongue), English (fluent), French (fluent), Spanish (basic)

Academic positions

2021–Present **Associate Professor**, *University of Florence*, Italy.
2018–2021 **Researcher**, *University of Florence*, Italy.
2016–2018 **Postdoctoral researcher**, *Perimeter Institute for Theoretical Physics*, Canada.
2012–2015 **Postdoctoral researcher**, *KU Leuven*, Belgium.

Titles

2018 *Abilitazione Scientifica Nazionale* in the sector 02/A2, fascia II, Italy
2017 Qualification N. 17229292291D to the position *Maître de conférences* in the section 29 – *Constituants élémentaires*, France

Education

2007–2012 **Ph.D. in Sciences**, *Vrije Universiteit Brussel*, Belgium.
Final mark *Greatest Distinction*
Title *Applications of the AdS/CFT correspondence to strongly coupled dynamics*
Supervisors Prof. Ben Craps & Prof. Alexander Sevrin
Equivalent to “Dottorato di ricerca”
2004–2007 **Master's degree in Physics**, *University of Milan*, Italy.
Final mark *110/110 cum laude*
Title *String solutions in gauged supergravity*
Supervisors Prof. Dietmar Klemm & Ph.D. Rodrigo Olea
2001–2004 **Bachelor's degree in Physics**, *University of Milan*, Italy.
Final mark *110/110 cum laude*
Title *Chaotic motions of the solar system*
Supervisors Prof. Luigi Galgani & Prof. Andrea Carati
2003–2004 Erasmus program, *Universidad de Cantabria*, Spain.

Individual grants

- 2018–2021 *Program for Young Researchers Rita Levi Montalcini 2015* for a 3-years tenure-track position *RTD b*) at the *University of Florence*, (Italy). Salary and personal research budget.
- 04-05/2017 Travel grant **Young Investigator Training Program** by *Galileo Galilei Institute* and *Fondazione ACRI* for the program *New Developments in AdS_3/CFT_2 Holography* at *GGI*, Firenze, and for research visit at *SISSA*, Trieste (Italy).
- 2012–2015 **FWO postdoctoral fellowship** of the *Research Foundation - Flanders (FWO - Vlaanderen)*, (Belgium). Salary and personal research budget.
- 2008–2012 **FWO Ph.D. fellowship** of the *Research Foundation - Flanders (FWO - Vlaanderen)*, (Belgium). Salary and personal research budget.

Publications

- [1] A. Bernamonti, F. Bigazzi, D. Billo, L. Faggi and F. Galli, *Holographic and QFT Complexity with angular momentum*, JHEP **11** (2021), 037 [arXiv:2108.09281 [hep-th]].
- [2] A. Bernamonti, F. Galli, J. Hernandez, R. C. Myers, S. M. Ruan and J. Simón, *Aspects of The First Law of Complexity*, 2020 J. Phys. A: Math. Theor. **53** 294002 [arXiv:2002.05779 [hep-th]]. Invited contribution for the special volume *A Passion for Theoretical Physics: In Memory of Peter G. O. Freund*.
- [3] A. Bernamonti, F. Galli, J. Hernandez, R. C. Myers, S. M. Ruan and J. Simón, *First Law of Holographic Complexity*, Phys. Rev. Lett. **123** (2019) no.8, 081601 [arXiv:1903.04511 [hep-th]].
- [4] A. Bernamonti, F. Galli, R. C. Myers and J. Oppenheim, *Holographic second laws of black hole thermodynamics*, JHEP **1807** (2018) 111 [arXiv:1803.03633 [hep-th]].
- [5] V. Balasubramanian, A. Bernamonti, B. Craps, T. De Jonckheere and F. Galli, *Heavy-Heavy-Light-Light correlators in Liouville theory*, JHEP **1708** (2017) 045 [arXiv:1705.08004 [hep-th]].
- [6] V. Balasubramanian, A. Bernamonti, B. Craps, T. De Jonckheere and F. Galli, *Entwinement in discretely gauged theories*, JHEP **1612** (2016) 094 [arXiv:1609.03991 [hep-th]].
- [7] C. T. Asplund, A. Bernamonti, F. Galli and T. Hartman, *Entanglement Scrambling in 2d Conformal Field Theory*, JHEP **1509** (2015) 110 [arXiv:1506.03772 [hep-th]].
- [8] C. T. Asplund, A. Bernamonti, F. Galli and T. Hartman, *Holographic Entanglement Entropy from 2d CFT: Heavy States and Local Quenches*, JHEP **1502** (2015) 171 [arXiv:1410.1392 [hep-th]].
- [9] C. T. Asplund and A. Bernamonti, *Mutual information after a local quench in conformal field theory*, Phys. Rev. D **89** (2014) 066015 [arXiv:1311.4173 [hep-th]].
- [10] V. Balasubramanian, A. Bernamonti, J. de Boer, B. Craps, L. Franti, F. Galli, E. Keski-Vakkuri, B. Müller and A. Schäfer, *Inhomogeneous holographic thermalization*, JHEP **1310** (2013) 082 [arXiv:1307.7086 [hep-th]].

- [11] V. Balasubramanian, A. Bernamonti, J. de Boer, B. Craps, L. Franti, F. Galli, E. Keski-Vakkuri, B. Müller and A. Schäfer, *Inhomogeneous Thermalization in Strongly Coupled Field Theories*, Phys. Rev. Lett. **111** (2013) 231602 [arXiv:1307.1487 [hep-th]].
- [12] A. Bernamonti, B. Craps and J. Vanhoof, *The spectral function in a strongly coupled, thermalising CFT*, PoS Corfu **2012** (2013) 121 [arXiv:1303.7342 [hep-th]].
- [13] V. Balasubramanian, A. Bernamonti, B. Craps, V. Keränen, E. Keski-Vakkuri, B. Müller, L. Thorlacius and J. Vanhoof, *Thermalization of the spectral function in strongly coupled two dimensional conformal field theories*, JHEP **1304** (2013) 069 [arXiv:1212.6066 [hep-th]].
- [14] A. Bernamonti, N. Copland, B. Craps and F. Galli, *Holographic thermalization of mutual and tripartite information in 2d CFTs*, PoS Corfu **2012** (2013) 120 [arXiv:1212.0848 [hep-th]].
- [15] A. Bernamonti, *Applications of the AdS/CFT correspondence to strongly coupled dynamics*, 2012 Uitgeverij VUBPRESS, Brussels University Press ISBN 978 90 5718 119 1, Ph.D. thesis.
- [16] V. Balasubramanian, A. Bernamonti, N. Copland, B. Craps and F. Galli, *Thermalization of mutual and tripartite information in strongly coupled two dimensional conformal field theories*, Phys. Rev. D **84** (2011) 105017 [arXiv:1110.0488 [hep-th]].
- [17] A. Bernamonti, *Two-point function probes of thermalization*, Nucl. Phys. Proc. Suppl. **216** (2011) 216-217.
- [18] V. Balasubramanian, A. Bernamonti, J. de Boer, N. Copland, B. Craps, E. Keski-Vakkuri, B. Müller, A. Schäfer, M. Shigemori and W. Staessens, *Holographic Thermalization*, Phys. Rev. D **84** (2011) 026010 [arXiv:1103.2683 [hep-th]].
- [19] A. Bernamonti, R. Peschanski, *Time-dependent AdS/CFT correspondence and the Quark-Gluon plasma*, Nucl. Phys. Proc. Suppl. **216** (2011) 94-120 [arXiv:1102.0725 [hep-th]].
- [20] V. Balasubramanian, A. Bernamonti, J. de Boer, N. Copland, B. Craps, E. Keski-Vakkuri, B. Müller, A. Schäfer, M. Shigemori and W. Staessens, *Thermalization of Strongly Coupled Field Theories*, Phys. Rev. Lett. **106** (2011) 191601 [arXiv:1012.4753 [hep-th]].
- [21] A. Bernamonti, B. Craps, *D-Brane Potentials from Multi-Trace Deformations in AdS/CFT*, JHEP **0908** (2009) 112 [arXiv:0907.0889 [hep-th]].
- [22] A. Bernamonti, M. M. Caldarelli, D. Klemm, R. Olea, C. Sieg, E. Zorzan, *Black strings in AdS(5)*, JHEP **0801** (2008) 061 [arXiv:0708.2402 [hep-th]].

My up to date publication record can be found on Inspire HEP:

<https://inspirehep.net/search?ln=en&ln=en&p=f+a+bernamonti>

Invited seminars and conference talks

- 05/2021 Invited lecture at *Perimeter Scholars International program*, Perimeter Institute for Theoretical Physics, Waterloo (Canada).
- 01/2021 Invited seminar at INFN Firenze, (Italy).
- 11/2020 Invited *Virtual String Theory seminar* at *University of Southampton*, (UK).
- 12/2019 Invited seminar at *Workshop on Qubits and Spacetime* at *Institute for Advanced Study*, Princeton (USA).
- 10/2019 Invited talk at *INFN meeting Theories of the Fundamental Interactions 2019*, Torino (Italy).
- 09/2019 Invited talk at conference *Challenges in Theoretical High-Energy Physics* at *NORDITA*, Stockholm (Sweden).
- 06/2018 Invited seminar at *GGI conference Quantum information in quantum gravity 4* of the workshop *Entanglement in Quantum Systems*, Firenze (Italy).
- 02/2018 Invited virtual seminar at *Albert Einstein Institute*, Potsdam (Germany).
- 05/2017 Invited seminar at *GGI conference Classical and quantum aspects of the AdS₃/CFT₂ correspondence* of the workshop *New Developments in AdS₃/CFT₂ Holography*, Firenze (Italy).
- 04/2017 Invited seminar at *SISSA*, Trieste (Italy).
- 01/2017 Invited seminar at *Padova University*, Padova (Italy).
- 01/2016 Group seminar at *Perimeter Institute for Theoretical Physics*, Waterloo (Canada).
- 11/2015 Invited seminar at *Joint KUL-ULB-UMons-VUB-Solvay seminars*, Bruxelles (Belgium).
- 05/2015 Conference talk at *Theory at sea 2015*, Ostende (Belgium).
- 04/2015 Invited seminar at *GGI conference Gauge/Gravity Duality 2015*, Firenze (Italy).
- 09/2014 Conference talk at *The String Theory Universe*, Mainz (Germany).
- 03/2014 Invited seminar at *New Perspectives on Thermalization*, Aspen (USA).
- 03/2014 Poster at *New Perspectives on Thermalization*, Aspen (USA).
- 12/2013 Invited seminar at *IAP Belgian meeting*, Louvain-la-Neuve (Belgium).
- 04/2013 Conference talk at *Workshop on Theoretical and Mathematical Physics in Flanders*, Oostduinkerke (Belgium).
- 01/2013 Seminar at *KU Leuven*, Leuven (Belgium).
- 04/2011 Invited *Seminaire de matrices, cordes et geometries aleatoires* at *IPhT*, Saclay (France).
- 05/2010 Conference talk at *Workshop on Theoretical and Mathematical Physics in Flanders*, Oostduinkerke (Belgium).
- 10/2009 Invited seminar at *Joint KUL-ULB-VUB-Solvay seminars*, Leuven (Belgium).
- 07/2009 Seminar at *Workshop and Conference on Holographic Cosmology* at *Perimeter Institute*, Waterloo (Canada).

Teaching

- 2021–2022 Master course *Elements of Quantum Gravity* in Physical and Astrophysical Sciences (3 CFU), *University of Florence*, Italy.
- 2021–2022 Bachelor course *Physics* in Natural Science (9 CFU), *University of Florence*, Italy.
- 2019–2020 Master course *Elements of Quantum Gravity* in Physical and Astrophysical Sciences
2020–2021 (5 CFU), *University of Florence*, Italy.
- 2019–2020 Bachelor course *Physics* in Civil, Construction and Environmental Engineering (3
2020–2021 CFU), *University of Florence*, Italy.
- 2020 *Holography and Quantum Information* (7 hours) at GGI doctoral school *LACES 2020: Lezioni avanzate di campi e stringhe*, Italy.
- 07/2016 Focus Lecture *Holographic Correlation Functions* (2 hours) at *It From Qubit Summer School*, *Perimeter Institute*, Canada.
- 07/2016 Tutoring at *It From Qubit Summer School* at *Perimeter Institute*, Canada.
- 2012–2015 Supervision of the exercise sessions of the *Quantum Field Theory* course of
& 2008–2010 Prof. Alexander Sevrin at *KU Leuven* and *Vrije Universiteit Brussel*, Belgium.
- 2014 *Capita Selecta* lectures on *Holographic Thermalization* (8 hours) at *KU Leuven*, Belgium.
- 2010 Exercise sessions of the *Quantum Mechanics* course of Prof. Ben Craps at *Vrije Universiteit Brussel*, Belgium.

Mentoring

- 2022–Present Master thesis advisor of Annamaria Chiarini, *University of Florence*, Italy.
- 2018–Present PhD advisor of Davide Billo, *University of Florence*, Italy.
- 2018–2019 Master thesis advisor of Lapo Faggi, *University of Florence*, Italy.
- 2013 Bachelor project co-advisor of Eline Meeus and Joren Vanherck (1 month), *KU Leuven*, Belgium.
- 2012 Bachelor project advisor of Thibaut Demaerel and Jasper Zwinnen (1 month), *KU Leuven*, Belgium.
- 2009–2010 Bachelor thesis co-advisor of Zino Boisdebgghien, *Vrije Universiteit Brussel*, Belgium.

Service for community

- Reviewer EPJC, JHEP, JSTAT, Nature, Phys. Rev. B, Phys. Rev. D and Phys. Rev. Lett. INFN, German-Israeli Foundation for Scientific Research and Development, NWO.
- 2022 Organizer of the GGI workshop *Reconstructing the Gravitational Hologram with Quantum Information* (6 weeks), Italy.
- 2020 Organizer of the GGI doctoral school *LACES 2020: Lezioni avanzate di campi e*
& 2021 *stringhe* (3 weeks), Italy.
- 2016–2017 Organizer of the *Quantum Fields and String Seminars* at *Perimeter Institute*, Canada.
- 2017 *Ask Me I'm a Scientist* outreach initiative at *Perimeter Institute* public lectures, Canada.

- 2012–2015 Organizer of the *Joint ULB-VUB-KUL-UMons-Solvay Seminars* at *Vrije Universiteit Brussel* and *KU Leuven*, Belgium.
- 2009 Organizer of the 2009 and 2010 editions of the *Modave Summer School in Mathematical Physics* (1 week), Belgium.
- & 2010

Curriculum Vitae of Filippo Colomo

February 23, 2022

Personal data

Born: December 12, 1961 in Florence, Italy

Citizenship: Italian and French

Institution: Istituto Nazionale di Fisica Nucleare (INFN)

Address: INFN, Sezione di Firenze, Via G. Sansone 1, I-50019 Sesto F.no (FI), Italy

Phone: +39-055-4572325 ; email: colomo@fi.infn.it

Web page: <http://theory.fi.infn.it/colomo/>

Education

Master Degree (Laurea) in Physics, with Honours, from University of Florence, Italy, October 14, 1986.

PhD in Physics from University of Florence, Italy, October 1990.

Employment

Permanent Researcher at Istituto Nazionale di Fisica Nucleare, Sezione di Firenze, since December 1993;

Post-Doctoral fellow at the Department of Physics of University of Florence, 1992-1993;

Post-Doctoral fellow at Niels Bohr Institute and Nordita, Copenhagen, 1990-1992.

Post-Doctoral fellow at INFN, Sezione di Firenze, 1990.

Research

Area of research: Mathematical Physics, and more specifically: exact results in statistical mechanics, quantum integrable and exactly solvable systems, with applications to combinatorics and particular interest to the 'limit shape' phenomena.

Other research interests: History and Philosophy of Physics, resulting, among others, in the book: *The Birth of String Theory*, A. Cappelli, E. Castellani, F. Colomo, P. Di Vecchia (eds.), Cambridge University Press (2012).

Author of over 40 papers in international scientific journals and of two edited books. Complete list of publications is available at: <http://theory.fi.infn.it/colomo/papers.html> and <http://theory.fi.infn.it/colomo/others.html>

Academic visits

Filippo Colomo has visited several university or international scientific institutions, such as: ECM at University of Barcelona; Niels Bohr Institute in Copenhagen; ICTP and SISSA in Trieste; Euler International Mathematical Institute in Saint Petersburg; PDMI-Steklov in Saint Petersburg; CRM in Montreal; Courant Institute at NYU; Schrodinger Institute in Wien, Institut Poincaré in Paris, MSRI in Berkeley, LPTHE at Université Pierre et Marie Curie in Paris; Institute of Applied Mathematics in Bonn, Simons Center for Geometry and Physics in Stony Brook; LIPN at Université Paris Nord; ICERM at Brown University in Providence.

Seminars and conferences

Filippo Colomo has attended over 100 international conferences or workshops, most of times also contributing with a talk. He has given about 50 invited talks at international conferences or workshops, or at international scientific institutions and universities. Some recent selected invited talks are available at <http://theory.fi.infn.it/colomo/talks.html>

Teaching

As an INFN Researcher, Filippo Colomo has no teaching duties. Nevertheless, upon request, he has given several courses, both at undergraduate and graduate levels:

General Physics I (Mechanics and thermodynamics), Faculty of Engineering, University of Florence (1996-97 and 1997-98);

Advanced Quantum Field Theory, PhD in Physics, University of Florence (2001, 2004, 2005);

Integrable and Exactly Solvable Models PhD in Physics, University of Florence (2007, 2010, 2014, 2019);

Random Matrix Models PhD in Physics, University of Florence (2007, 2009, 2011, 2017,2020);
Mathematical Methods for Theoretical Physics Master in Physics, University of Florence (since 2014).

Other activities

Member of the Organizing Committees for

- 11 international scientific conferences and workshops;
- a semester program on '*Statistical Mechanics, Integrability and Combinatorics*', held at Galileo Galilei Institute for Theoretical Physics (GGI), in Florence, on Spring 2015;
- a semester program on '*Randomness, Integrability and Universality*', to be held at Galileo Galilei Institute for Theoretical Physics (GGI), in Florence, on Spring 2022;
- the graduate school on '*Statistical Field Theories*', held yearly at Galileo Galilei Institute for Theoretical Physics (GGI), since 2014. Web: <http://theory.fi.infn.it/SFTschool/>

Organizer and coordinator of the *Interdisciplinary Seminar on Philosophy and Physics*, of the University of Florence (2004-present). Web page:

<http://www.lettereifilosofia.unifi.it/vp-198-seminario-interdisciplinare-fisica-filosofia.html>

'*Esperto*' for research grants referrals and other scientific evaluations for the Science and Education Department of the Italian Government (2010-present).

'*Expert evaluator*' for research grants evaluation for the National Council for Scientific Research of Romania (2011-present).

'*Expert evaluator*' for research grants evaluation for the Narodowe Centrum Nauki (National Science Center) of Poland (2013).

Fellowships and grants

National Research Grant E44HRF '*Low-dimensional quantum systems:theory, experiments and simulations*', PRIN 2017, coordinator: P Calabrese (2019-2022).

European Network QICFT: '*Quantum Integrability, Conformal Field Theory and Topological Quantum Computation*', Marie Curie Actions IRSES (2011-2015).

National Research Grant JHLPEZ '*Fisica Statistica dei Sistemi Fortemente Correlati all'Equilibrio e Fuori Equilibrio: Risultati Esatti e Metodi di Teoria dei Campi*', PRIN 2007, coordinator: G. Mussardo (2008-2010).

European Network INSTANS: '*Interdisciplinary Statistical and Field Theory Approaches to Nanophysics and Low Dimensional Systems*', European Science Fundation (2006-2010).

National Research Grant SINTESI '*Singularità, Integrabilità, Simmetrie*', PRIN 2004, coordinator: F. Calogero (2004-2006).

European Network EUCLID: '*European Collaboration Linking Integrability with other Disciplines*', EC program for Training and Mobility of Researchers (2002-2006).

European Network '*Integrability, Non-perturbative Effects, and Symmetry in Quantum Field Theory*', EC program for Training and Mobility of Researchers (1997-2000).

INFN research grant FI11 on '*Statistical Mechanics and Quantum Field Theory*', INFN commission for Theoretical Physics (1996-current).

European Network '*New Methods in Quantum Field Theory: Infinite Symmetries in Statistical Mechanics and String Theory*', EC program for Human Capital and Mobility (1993-1996).

Florence University Post-Doctoral Fellowship (1992-1993)

'Angelo Della Riccia' Post-Doctoral Fellowship, Niels Bohr Institute, (1991-1992)

INFN Post-Doctoral Fellowship in Theoretical Physics(1990-1992).

Graduate Student Fellowship, PhD in Physics, University of Florence (1987-1990).