

ORESTE NICROSINI

PERSONAL INFORMATION

- Born in Pavia, April 16th, 1961
- Married, one son and one daughter

EDUCATION

- 2011: Laurea Magistrale, Piano, Conservatorio di Musica F. Vittadini, Pavia, Summa cum Laude
- 1991: Piano Diploma ("vecchio ordinamento"), Conservatorio G. Verdi, Milano
- 1989: Ph.D. Physics, thesis on "Electromagnetic Radiative Corrections at the Z0 Peak"
- 1984/87: participation to several international schools, e.g. International School of Physics "Enrico Fermi", Summer Course on "Elementary Particles", Varenna (1984); Spring School and Workshop on Supergravity, Supersymmetry and Superstrings, ICTP, Trieste (1986); International School of Subnuclear Physics, 25th course, "The Super World – II", Erice (1987)
- 1986: Military Service
- 1985: M.S. Physics (Laurea), University of Pavia, score 110/110 summa cum laude, thesis on "Goldstone Bosons and the Decoupling Theorem"
- 1980/84: Alumnus of Almo Collegio Borromeo, Pavia (national competition, www.collegioborromeo.it)
- 1980: High School Degree (Maturità classica, Liceo Ginnasio S. Grattoni, Voghera, PV), score 60/60

CURRENT POSITION

- Director of Research, Istituto Nazionale Fisica Nucleare (INFN); Head, Pavia Unit, and member of the INFN Board of Directors
- Founder and Senior Member of the Research Group in Theoretical Physics of Elementary Particles and Complex Systems, active at the Pavia Unit of INFN and Dipartimento di Fisica, Università di Pavia (since 1989), and involved in several international collaborations
- Professor for the official course of "Quantum Mechanics" (advanced module), University of Pavia (under the Agreement INFN-UNIPV, since 2012)
- Member of the Graduate School Committee, Scuola di Dottorato in Scienze e Tecnologie, Graduate Program in Physics, University of Pavia (since 2001)
- Coordinator of the PhD Course "Electroweak and QCD Theories", Scuola di Dottorato in Scienze e Tecnologie, Graduate Program in Physics, University of Pavia (since 2012)
- Member, Istituto Lombardo Accademia di Scienze e Lettere, Palazzo Brera, Milano (since June 2024)
- Member of the Editorial Board of UNITEXT for Physics - Springer (since 01/2005)
- Member of the Scientific Board of Almo Collegio Borromeo, Pavia (since 2015)
- Qualified Full Professor for the Scientific Sector 02/A2 – Theoretical Physics of Fundamental Interactions
- Performs concert activity as member of a two-piano duo with Prof. AnnaMaria Bordin (Conservatorio "G. Verdi", Torino)

CAREER TRACK

- Director of Research, Istituto Nazionale Fisica Nucleare (since 01.01.2007)
- Senior Researcher, Istituto Nazionale Fisica Nucleare (from 01.11.1999 to 31.12.2006)
- Researcher, Istituto Nazionale Fisica Nucleare (from 28.12.1988 to 31.10.1999)

HONORS AND AWARDS

- Member, Istituto Lombardo Accademia di Scienze e Lettere, Palazzo Brera, Milano (since June 2024)
- Corresponding Fellow, Istituto Lombardo Accademia di Scienze e Lettere, Palazzo Brera, Milano (June 2017 – June 2024)
- Fellow - CERN - TH Division 11/1993 10/1995
- Scientific Associate - CERN - TH Division (invited by) 10/1990 11/1990
- Alumnus, Almo Collegio Borromeo, Pavia, 1980-1984 (national competition, www.collegioborromeo.it)

SCIENTIFIC ACTIVITY

(Co)author of more than 170 scientific papers. H-index = 57; number of citations: 15507; i10-index = 121 (source Google Scholar, 18.07.2024)

Several *topcite* papers: 7x500+, 4x250+, 21x100+, 24x50+ (source INSPIRE HEP, 23.05.2024)

Carries out research activity since 1987, mainly in the field of phenomenology of fundamental interactions, with particular reference to precision calculations of Standard Model processes relevant to electron-positron and proton-(anti)proton colliders, as well as muon-electron scattering (MUonE). (Co)author of several computational codes, used by the most relevant experiments at the most important international laboratories of subnuclear physics.

Also works on the Foundations of Quantum Mechanics (in collaboration with A. Rimini) and on Econophysics (with G. Montagna).

TEACHING ACTIVITY

- Professor for the official course of "Quantum Mechanics" (advanced module), University of Pavia, since 2012 (under the Agreement INFN-UNIPV)
- Coordinator of the series of lectures "Frontiers of Fundamental Physics", Almo Collegio Borromeo, Pavia (<http://www.collegioborromeo.it/it/sostieni-il-collegio/conferenze-e-convegni/>, since 2015)
- Professor for the official course of "Theory of Fundamental Interactions", University of Pavia, 2004-2016 (under the Agreement INFN-UNIPV)
- Coordinator of the PhD Course "Electroweak and QCD Theories", Scuola di Dottorato in Scienze e Tecnologie, Graduate Program in Physics, University of Pavia (since 2009)
- Professor for the official course of "Computational Methods for Physics", University of Pavia, 2002-2008 (under the Agreement INFN-UNIPV)
- Contract Professor of the Module "Classical Computational Methods", Second Level International Master of Science in "Methods for Management of Complex Systems", Istituto Universitario Studi Superiori, Pavia (from 2003 to 2008)
- Professor for the complementary courses "Approximate Methods in Quantum Mechanics" and "Introduction to Gauge Theories of Fundamental Interactions", University of Pavia, 1995-2001 (under the Agreement INFN-UNIPV)
- Teaching assistant of the course "Istituzioni di Fisica Teorica" (Quantum Mechanics, Prof. A. Rimini), University of Pavia, 1988-1993

TUTORING

Since 1989, tutor of 3 post-doc, 7 PhD and over 20 undergraduate students at the University of Pavia and the Pavia Unit of INFN.

ROLES AND RESPONSIBILITIES

- Coordinator (in collaboration with S. Jadach, Crakow) of the Working Group “Event Generators for Bhabha Scattering”, Workshop on Physics at LEP2, CERN, Ginevra, Switzerland, January/October 1995
- INFN Assessment: Member (2002-2005) and Convener (2006) of the "Working Group Theoretical Physics for INFN evaluation"; Co-author of the self-assessment annual reports of INFN to the Comitato Internazionale Valutazione (CIV, 2002-2006); Member of the INFN Working Group for the procedures of "Valutazione Triennale della Ricerca INFN" relative to the time span 2001/2003 (VTR 2001-2003) promoted by Comitato di Indirizzo per la Valutazione della Ricerca (CIVR) of the Italian Ministry of Education, University and Research (2004)
- Founder (with G. Goggi, IUSS, and G. Montagna, University of Pavia) of the Second Level International Master of Science in "Methods for Management of Complex Systems", Istituto Universitario Studi Superiori (IUSS), Pavia, 2002; Member of the Scientific Committee (all editions, 2003-2008); Coordinator and vice-Director (2003-2005 editions)
- Director of the Second Level International Master of Science in "Methods for Management of Complex Systems", Istituto Universitario Studi Superiori (IUSS), Pavia, 2006-2008 editions
- Coordinator of the Pavia Theory Group of INFN and Member of Commissione Scientifica Nazionale IV (Theory Committee) of INFN (July 1999 to June 2005)
- Referee of the INFN Theory Committee for the astroparticle sector (2001-2005)
- Committed in several official tasks by INFN such as Member of the Evaluation Committee for the assignment of the position of Researcher, Pavia Unit (4486/93) and Member of several Evaluation Committees for the assignment of post-doc positions (from 1991); spokesman of the Pavia Unit Researchers (1991-1993 and 1997-1999)
- Head of INFN Pavia Unit and member of INFN Board of Directors

PARTICIPATION TO INTERNATIONAL WORKING GROUPS

- Strong2020 Theory Initiative (from 2023)
- Higgs Physics at the HL-LHC and HE-LHC (from 2017 to 2019)
- CEPC Study Group (from 2017 to 2018)
- Future Circular Collider (FCC) Study, CERN (since 2014)
- LHC HiggsXS, CERN (from 2014 to 2019)
- Physics at TeV Colliders, Les Houches (2015)
- INFN What Next (2014-2015)
- Electroweak precision measurements at the LHC, CERN (since 2015)
- Radiative corrections and Monte Carlo generators for low energies, INFN Frascati (from 2006 to 2016)
- Physics at TeV colliders / Standard Model handles and candles, Les Houches (2007)
- TeV4LHC / Top and Electroweak, Fermilab (2005-2006)
- Precision calculations for LEP2 Physics, CERN (1999)
- Physics at LEP2, CERN (1996)
- Precision calculations for the Z resonance, CERN (1995)
- Physics at HERA, DESY (1991)
- Z Physics at LEP1, CERN (1989)

COLLABORATION WITH EXPERIMENTAL GROUPS

- ATLAS and CMS at the LHC for the measurement of the W/Z production cross section
- MUonE Collaboration for the measurement of the leading order hadronic contribution to the muon anomaly
- CDF at the Tevatron for the precise measurement of the W boson mass
- KLOE, BES, BaBar and Belle for luminosity monitoring at flavor factories

- All four LEP collaborations for the analysis of single and multi-photon events with missing energies above the Z peak
- L3, OPAL and the LEP Electroweak working group for constraints on anomalous quartic gauge couplings at LEP
- OPAL and the LEP Electroweak working group for the estimate of the theoretical error in the small-angle Bhabha cross section calculation and related luminosity measurement at LEP
- All four LEP collaborations and the LEP Electroweak working group for electroweak measurements and constraints on the Standard Model parameters at the Z resonance

CONFERENCE ORGANIZATION

- Member of the Organizing Committee of the "VII Young Researchers BNCT Meeting", Almo Collegio Borromeo, Pavia, September 13-17, 2015
- Member of the International Advisory Committee of the Workshop "Dark Forces at Accelerators", INFN, Laboratori Nazionali di Frascati, 16-19 October 2012
- Member of the Organizing Committee of the Conference "IFAE 2006 – Incontri di Fisica delle Alte Energie", Pavia, April 19-21, 2006
- Member of the Organizing Committee of the International Conference "Frontier Science 2003 – A non-linear world: the real world", Pavia, September 8-12, 2003

SCIENCE COMMUNICATION

- Coauthor of the contribution "A journey to discover complexity", in "Science for everybody", INFN (<http://scienzapertutti.lnf.infn.it/>)
- Several introductory seminars on "Fundamental Interactions" or "Quantum Mechanics" to secondary school students and many other non-expert audiences

GRANTS (RESPONSIBILITIES)

- INFN Project Quantum Field Theory at Colliders "QFT@Colliders" (2014-2019), Coordinator of Pavia Unit (National Coordinator F. Piccinini)
- INTAS Ref. Nr. 05-1000008-8328, Higher Order Effects in e^+e^- Annihilation and Muon Anomalous Magnetic Moment, 2007-2009, 30 months, INFN Scientific Official (Coordinator L. Trentadue)
- INFN Project PR21 "Field Theory of Fundamental Interactions", from 2006, 96 months, Coordinator of Pavia Unit (National Coordinator P. Nason)
- INFN Project PR21 "Field Theory of Fundamental Interactions", 1996-1999, 48 months, Coordinator of Pavia Unit (National Coordinator G. Marchesini)
- INFN Project TO23 "Phenomenology at Colliders", 1996-1998, 36 months, Coordinator of Pavia Unit (National Coordinator G. Passarino)
- INFN Project TO4 "Phenomenology at Colliders", 1994-1995, 24 months, Coordinator of Pavia Unit (National Coordinator G. Passarino)
- INFN Project PR1 "Field Theory of Fundamental Interactions", 1992-1995, 48 months, Coordinator of Pavia Unit (National Coordinator G. Marchesini)
- INFN Project PR3 "Precision Physics at LEP", 1992-1993, 24 months, Coordinator of Pavia Unit (National Coordinator L. Trentadue)
- INFN Project PR1 "Field Theory of Fundamental Interactions", 1990-1991, 24 months, Coordinator of Pavia Unit (National Coordinator L. Trentadue)

GRANTS (MEMBERSHIP)

- PRIN2022: "MUS4GM2: muon scattering for G-2"; Research Project Principal Investigator F. Piccinini (INFN Pavia), 24 months (started 2023), Member of Pavia Unit
- PRIN2010: "Symmetries, Masses and Mysteries: electroweak symmetry breaking, flavour mixing, CP violation and dark matter in the LHC era"; Research Project Principal Investigator G. Martinelli (SISSA), 36 months (starting soon), Member of Pavia Unit
- LHCPHENONET: "Advanced Particle Phenomenology in the LHC era", Initial Training Network supported by the 7th Framework Programme of the European Commission (Contract PITN-GA-2010-264564, started 1st January 2011, Coordinator G. Rodrigo, Valencia), 48 months, Member of Pavia Unit
- INFN Project PR21 "Field Theory of Fundamental Interactions", National Coordinator G. Marchesini, 2000-2005, 72 months, Member of Pavia Unit

Pavia, 18.07.2024

Oreste Nicosini

