

Enrico Nardi : Short curriculum vitae

PERSONAL INFORMATION

Name: Enrico Nardi
Born: December 23, 1955 in Milano, Italy
Nationality: Italian
ORCID: [0000-0001-7165-3808](https://orcid.org/0000-0001-7165-3808)
Web site: www.lnf.infn.it/~enardi

EDUCATION

1991 Ph.D. SISSA (Trieste, IT). Title: “*Exotic fermion phenomenology*”, Supervisor: Prof. A. Masiero
1990 *Research Associate* in the Program for Advanced Graduate Student, CERN (Geneva, CH)
1989 M. Sc. in Elem. Particles (30/30 *cum Laude*), SISSA (Trieste, IT), Supervisor: Prof. D. Amati

CURRENT POSITION

2019 - INFN Research Director. (2009-2019 Senior Researcher; 2001-2009 Researcher)

PREVIOUS POSITIONS

2010 - 2011 Visiting Professor, Madrid Autonoma U. & Institute for Theoretical Physics (Madrid, ES)
1997 - 2009 Professor of Physics, Postgraduate program, University of Antioquia (Medellín, CO)
1994 - 1997 Research fellow, Feinberg Graduate School, Weizmann Institute of Science (Rehovot, IL)
1991 - 1994 Research fellow, Particle Theory Group, Physics. Dept., U. of Michigan, (Ann Arbor, USA)
2018 - Italian ASN level 1, with all indicators well above threshold (qualification as a full professor)

AWARDS, GRANTS AND RECOGNITIONS

2017 & 2020 Highlight as Phys. Rev. Lett. Editors’ Suggestion for two papers on axions: [1610.07593](https://arxiv.org/abs/1610.07593) and [2006.12487](https://arxiv.org/abs/2006.12487) for “particular importance, innovation, and broad appeal”.

2018 - 2019 Two Simons Foundation grants from ACP (Aspen, USA) as Leader of Working Group on Axions (2019) and as invited expert in the workshop “Origin of the baryon-asymmetry” (2018).
Two M. de Maeztu grants (2018, 2019) from U. de Barcelona (ES) for visiting scientists.

2014 - 2017 PRIN-2012 Grant: Theoretical Astroparticle Physics., coordinator for LNF and RM1 nodes

2010 - 2011 INFN-MICINN ACI2009-1038 grant for collaboration between LNF and U. of Barcelona

2009 Faculty of Science, UdeA: Plaque and letter of commendation for: ‘*commitment, responsibility, ethics, honesty, initiative, vocation, leadership, always accompanied by excellent human relations, which leave an indelible mark on our institution...*’ (Awarded on the day I resigned).

2006 Faculty of Science, UdeA: Parchment: ‘*In recognition of the leadership of the HE group and for the contributions to the excellence and development of scientific research in the Faculty*’.

2003 - European member of the Int. Scientific Committee of the “HEP Latin American Symposium”.

1998 - 2007 Awarded three COLCIENCIAS (CO) national grants (B-physics, Supernova neutrinos, Leptogenesis), and four University (UdeA, CO) research grants (ν -oscillations, ν ’s in supersymmetry, GUT Yukawa couplings, and as HEP Group Coordinator) (\approx 250 k€ total).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

1997 - 2019 Supervision of 5 Ph.D. (D. Guetta, J. M. Mira, J. I. Zuluaga, L. A. Muñoz, C. D. Ruiz Carvajal), 4 M.Sc. and 2 B.Sc. students (*all presently holding academic positions*).

2007 - 2020 Supervision of 8 postdocs (8 different nationalities) D. Aristizabal, E. Peinado, C.S. Fong, A. Meroni, S. Boucenna, M. Krauss, F. Bjorkerth, L. Darmé. (2 new postdocs from Nov. 2020)

TEACHING ACTIVITIES

Postgraduate Courses (14 semesters): Introduction to QFT, Supersymmetry, Physics of the Early Universe, Advanced topics in the SM, Neutrinos in Physics and Astrophysics (UdeA), Standard Model II (UAM)

Undergraduate Courses (7 Semesters): Electromagnetism I, Subatomic Physics, Standard Model (UdeA)

Short postgraduate courses: Odense Winter School on Theoretical Physics, CP3-Origins, (2017), University of Barcelona (2010), U. San Carlos de Guatemala (2007), AstroScuola 2001 - Otranto (Lecce).

Outreach: About a dozen lectures for high schools, Italian institute of culture, and for a general audience. Scientific collaborator for the INFN outreach project “ScienzaPerTutti” and “LNF Highlights” publication.

ORGANISATION OF SCIENTIFIC MEETINGS

- 2020 Proposer/Contact person: Aspen Workshop on Axions (recommended for Summer 2022)
- 2019 Proposer/Group leader: Aspen Working Group “*The landscape of QCD axion models*”
- 2019 Organiser: LNF Institutes “*Axions & NGB*” and “*Axions in Astrophysics and Cosmology*”
- 2019 Co-organiser: LNF Autumn Institute “*Directional Sub-GeV DM Detection*” (Chair: M. Benito)
- 2019 Deviser/co-organiser of the Rome Physics Encounters @ LNF (3 editions. Chair: L. Darmé)
- 2019 Convener of the “*Ultralight Dark Matter*” session at the 3rd LDMA conference (Venice, IT)
- 2018 Organiser: LNF Summer Institute “*Flavor Physics, axions phenomenology and dark sectors*”
- 2014 - 2017 Deviser and main organiser of the “*Rome Joint Workshops*” series (6 workshops held)
- 2009 - 2016 Director of the “*Frascati Spring School Bruno Touscheck*” (5 editions). Deviser and director of the Young Researcher Workshops “*Physics challenges in the LHC era*” (5 editions)
- 1997 - 2009 Local Org. Committee co-chair: 5th Latin American CERN School (Medellín, CO). Co-Chair: International Meeting on Leptogenesis (Medellín, CO). Chair: III Latin American Symposium on High Energy Physics, (SILAFEA-III), Cartagena de Indias, (CO). Convener of the session: *Neutrino Physics, Astrophysics and Cosmology*, 10th Marcel Grossmann Meeting, Rio de Janeiro (BR). Chair: 3rd Latin American Symposium on HEP (SILAFEA-III), Cartagena de Indias, (CO). Director: Colombian School in Theoretical Physics, San Andres Islas, (CO)

INSTITUTIONAL RESPONSIBILITIES

- 2019 - In charge of the postdoctoral “Cabibbo Fellowship” in the memory of Prof. Nicola Cabibbo
- 2015 - Coordinator of the Theory Group of the Frascati National Laboratories (LNF)
- 2015 - Member of the INFN National Scientific Theory Commission (CSN4)
- 2014 - 2017 Local LNF responsible for the grant PRIN-2012 in Theoretical Astroparticle Physics
- 2009 - Member of various selection committees for INFN/LNF postdoctoral positions
- 2002 - LNF responsible of the INFN “Iniziativa Specifica” *Theoretical Astroparticle Physics* (TAsP)
- 2002 - 2007: Federation Arrangement: Abdus Salam ICTP (Trieste, IT) and Physics Institute (UdeA, CO)
- 2001 - 2002 Cooperation Agreement COLCIENCIAS/CSIC: Phys. Inst. (UdeA, CO) - U. Valencia (ES)
- 1998 - 2008 Head of the High Energy Particle Physics Group (GFIF), U. Antioquia (CO)

REVIEWING ACTIVITIES

- 2018 - 2019 Projects reviewer: FELLINI-Fellowships, co-financed through the MSC COFUND Action
- 2015 - Internal referee for Astroparticle Theory, INFN National Scientific Commission 4 (CSN4)
- 1993 - Referee for all major Particle Phys. Journals (PRL, PRD, NPB, PLB, JHEP, JCAP, etc.)
- 2002 - Reviewer for: French National Research Agency; FONDECYT (CL); Erwin Schrödinger International Inst. (Vienna U.); National Science Centre (PL); COLCIENCIAS and CODI (CO).

MAJOR SCIENTIFIC COLLABORATIONS

Counting only articles with two-to-five authors, I have 65 papers with 71 different co-authors, including 13 papers with C.S. Fong (Sao Paulo U., BR), 10 with E. Roulet (Centro Atómico Bariloche, AR), 8 with L. Di Luzio (DESY, DE), 6 with Y. Grossman (Cornell U., USA), Y. Nir (Weizmann Inst., IL), D. Aristizabal (Santa María U., CL) and F. Mescia (Barcelona. U, ES), 5 with M.C. Gonzalez-Garcia (Stony Brook, USA). My collaborators are from institutes all around the world. Many were students/postdocs at the beginning of the collaboration.

CAREER BREAKS AND UNCONVENTIONAL CAREER PATH

For personal issues I had to interrupt my undergraduate career. I graduated (*cum laude*) only at 31. I was then admitted in SISSA where I worked on my M.Sc. and Ph.D. thesis alone, or collaborating with other Ph.D. students (I have no papers with supervisors). I showed early scientific independence publishing five single authored papers during the Ph.D. and first postdoc (U. of Michigan). During my second postdoc (Weizmann Inst.) I supervised my first Ph.D. student. In 1996 I was offered a professorship position aimed to set up a Ph.D. program in physics in the U. of Antioquia (Medellín, CO) to serve the whole Department (pop. 6 millions). Every semester I would teach a different course. I graduated 5 Ph.D., 4 M.Sc., 2 B.Sc. students (all holding academic positions). My commitment to develop science in the country was total, I organised international schools, conferences, workshops, and hosted in Medellín the 2009 CERN Latin American School. I made bloom a group of highly skilled people to which I passed the baton in 2009. During this phase of my career, scientific isolation and overwhelming organisational and teaching duties have unavoidably slowed down my scientific production. Yet, I consider what I managed to accomplish among the crowning achievements of my scientific career.