

# CURRICULUM VITAE OF ANTONIO EREDITATO

(MAY 2020)



## GENERAL INFORMATION

- Birthday/birthplace 2 June 1955, Napoli, Italy
- Citizenship Italian
- Civil status Married
- Languages Italian (mother language), English (fluent), French (fluent)
- Field of interest Experimental elementary particle physics
- Present position Ord. Prof. of Experimental Particle Physics at the University of Bern
- Function Director of the Laboratory for High Energy Physics,  
Co-Director of the Physics Institute,  
Member of the Executive Board of the Albert Einstein Center for  
Fundamental Physics
- Web pages, e-mail [www.lhep.unibe.ch](http://www.lhep.unibe.ch) [www.einstein.unibe.ch](http://www.einstein.unibe.ch) [antonio.ereditato@cern.ch](mailto:antonio.ereditato@cern.ch)

## EDUCATION

- Master in Physics “Laurea” in Physics, Magna Cum Laude, Federico II University, Napoli, February 1981
- PhD in Physics Federico II University, Napoli, July 1987  
Thesis: An experiment for the precision measurement of the Weinberg angle from neutrino-electron scattering
- Schools of Physics CERN Summer Student, 1981  
CERN School of Physics, Cambridge, 1982  
XXI School of Sub-Nuclear Physics, Erice, 1983

## AWARDS AND HONORS

- Prize of the Italian Physical Society (SIF) for Young Researchers, Trieste, 1985
- Breakthrough Prize for Fundamental Physics 2016 (shared) for: *the fundamental discovery of neutrino oscillations, revealing a new frontier beyond, and possibly far beyond, the standard model of particle physics*
- Literary Prize: Premio Caccuri 2017, Letteratura e Scienza
- Literary Prize: Premio Maria Antonia Gervasio 2017, for the best scientific divulgation book

- Honorary Citizen of the City of Caccuri, 2018
- Officer - Order of Merit of the Italian Republic, 2018

## PROFESSIONAL RECORD

- Visiting Researcher IN2P3, Centre de Recherches Nucléaires (CRN), Strasbourg, 1982-1983
- PhD Fellowship at the Federico II University, Napoli, 1983-1986
- Fellowship at the Experimental Physics Division, CERN Geneva, 1985-1988
- Researcher at INFN Napoli, since June 1988 (tenured)
- Senior Researcher at INFN Napoli, since November 1990 (tenured)
- Paid Scientific Associate, CERN Geneva (on leave of absence from INFN), 1993-1994
- Fellowship of the Japan Society for the Promotion of Science, Nagoya, 1996
- Director of Research at INFN Napoli, 1998-2006 (tenured)
- Full Professor of Experimental Particle Physics at the University of Bern, since April 2006 (present position)
- CERN Scientific Associate since 1981
- Faculty of the Collegio Europeo di Parma - Master in European Advanced Studies (2017→)

## RESEARCH ACTIVITIES

**Main research field: experimental particle physics. Experience with neutrino physics, particle detectors, application of particle physics to medicine, applied physics, astroparticle physics.**

- 1979→1981: Study of MWPCs with cathode readout for the detection of X-rays with synchrotron radiation
- 1981→1985: Study of dimuon production in high-energy  $\pi$  interactions at the CERN SPS (NA10 experiment)
- 1983→1993: Study of electroweak interactions through  $\nu$ -electron scattering and search for rare processes induced by neutrinos at CERN (CHARM II experiment)
- 1988→1990: Development of the first prototypes of plastic fiber-lead calorimeters for high-resolution energy measurement at hadron colliders (CERN SPACAL/LAA project)
- 1989→2003: Search for  $\nu_{\mu}$ - $\nu_{\tau}$  oscillations at the CERN SPS neutrino Wide Band Beam (CHORUS experiment)
- 1990→1992: Study of fibre-lead calorimetry for future experiments at the CERN LHC (RD1 experiment)
- 1992→1994: R&D study on liquid scintillator calorimeters for high-rapidity, high-dose, high-luminosity experiments (FORWARD project at CERN)
- 1995→1997: CERN R&D study of high space-resolution trackers of glass-capillary detectors, read out by opto-electronic chains, for experiments on  $\nu_{\tau}$  and B physics (RD46 experiment/ACTAR)
- 1995→1997: Conceptual design of a new experiment for the search of  $\nu_{\mu}$ - $\nu_{\tau}$  oscillations with very-high sensitivity at CERN (TENOR project)
- 1996→1998: Proposal and studies for a new high-sensitivity experiment to search for  $\nu_{\mu}$ - $\nu_{\tau}$  oscillations at CERN (TOSCA project)
- 1996→2002: Conceptual design, proposal and studies for a long baseline experiment on the CERN CNGS neutrino beam to the LNGS (OPERA experiment)
- 1997→2002: TMR EU research program for the study of fast micro-track imaging (TMR ERB-PL-97-0319)
- 1997→2003: Design of the long baseline CERN CNGS neutrino beam
- 2002→2005: Study of solar, atmospheric, supernova and accelerator neutrinos; search for nucleon decay and for other rare astro-particle processes at the LNGS (ICARUS experiment)
- 2003→2005: Search for Dark Matter particles with a liquid Argon detector at LNGS (WARP experiment)

- 2003→ R&D study for future liquid Argon TPC detectors
- 2006→ 2015 OPERA experiment at the LNGS: search for  $\nu_\tau$  appearance in the CNGS beam
- 2006→ ATLAS experiment at the CERN LHC: a general-purpose high-energy p-p collider experiment
- 2006→ T2K experiment in the J-PARC to Kamioka  $\nu_\mu$  beam for the measurement of the  $\theta_{13}$  mixing angle
- 2006→ 2016 NA61 experiment at the CERN SPS for the study of proton interactions relevant for the T2K experiment
- 2007→ Applications of particle physics to medicine: radioisotopes and hadron-therapy (Bern Inselspital Cyclotron)
- 2008→ 2011 Study of possible European underground sites for the next generation of astro-particle and neutrino physics observatories (EU projects LAGUNA and LAGUNA-LBNO)
- 2010→ Study of low energy neutrino interaction with liquid Argon TPCs (ArgoNeuT experiment at Fermilab)
- 2010→ R&D study of cosmic-ray muon tomography by emulsion films
- 2010→ Study of neutrino interactions in a large liquid Argon TPC (MicroBooNE experiment at Fermilab)
- 2011→2016 Test of the weak equivalence principle with neutral antimatter (AEGIS experiment at CERN)
- 2013→ Search for sterile neutrinos with two joint liquid argon detectors (SBND and MicroBooNE experiments at Fermilab)
- 2014→ Search for CP violation, measurement of the neutrino mass hierarchy with a long baseline neutrino experiment, and astro-particle physics and proton decay searches (DUNE experiment at Fermilab/SURF South Dakota)
- 2015→ cosmic-muon 3D tomography of alpine glaciers
- 2016→ QPLAS experiment: antimatter interferometry
- 2018 → EU research program INTENSE: Particle physics experiments at the intensity frontier. A cooperative Europe - United States - Japan effort (MSCA-ITN-2019)

## SUMMARY OF THE SCIENTIFIC PUBLICATIONS

- Invited speaker at 41 International Conferences
- Author of 1330 papers in the *InSPIRE* database. Total number of citations (citeable papers): 134000, average citations per paper: 104.7
- H-index: InSPIRE 166, Google Scholar 163
- Full publications list and bibliometry: <http://inspirehep.net/author/profile/A.Ereditato.1>

## MAIN SCIENTIFIC ACHIEVEMENTS

- Responsible for a specific trigger for tri-muon search (B meson decay) in the NA10 experiment and related physics analysis. Main author of the final publication
- Responsible for the installation, operation and calibration of the streamer tube calorimeter of the CHARM II experiment. Main author of analyses on the calorimeter performance
- Measurement of the Weinberg angle in  $\nu_\mu$  - electron interactions
- Initiative to contribute with an INFN Napoli group to the CERN SPACAL project and to the follow up RD1 experiment. World record energy resolution for hadronic calorimeters
- Co-promoter of the CALOR Conference series (1991→)
- Proponent of R&D studies on new liquid scintillator calorimeters (FORWARD) and trackers (ACTAR)
- Proposal of using a lead-fiber calorimeter in the CHORUS experiment. Later appointed Project Leader for its construction and responsible of its operation. Initiative to set up and operate a CHORUS emulsion scanning laboratory at INFN Napoli
- Measurement of neutrino properties and of neutrino induced processes with the CHARM II and CHORUS experiments. Most sensitive limit to  $\nu_\mu$ - $\nu_\tau$  oscillations with a short baseline experiment

- Initiative and proposal of new high-sensitivity, short-baseline neutrino oscillation experiments: TENOR and TOSCA
- Co-proponent of the conceptual idea of the OPERA experiment. Leader of the initial phase of the experiment, until its scientific approval. Spokesperson of the Collaboration from 2008 to 2012
- Co-author of the Technical Design Report of the CNGS neutrino beam
- Setting up of a cryogenic laboratory at INFN Napoli to develop LAr TPCs within the ICARUS project
- As LHEP and AEC Director in Bern, promoter of new initiatives in addition to ATLAS and OPERA: T2K and NA61 experiments, R&D on novel cryogenic detectors, medical physics, novel applications of nuclear emulsions for muon and proton radiography, measurement of the equivalence principle for antimatter (AEgIS experiment), search for sterile neutrinos (MicroBooNE experiment), future LBL experiments (EU funded LAGUNA and LGUNA/LBNO projects)
- First indication of a non-zero  $\theta_{13}$  angle in the PMNS neutrino mixing matrix with the T2K experiment
- World record drift track length in LAr TPCs with the ARGONTUBE detector
- First application of UV laser calibration for LAr TPCs
- Co-proponent of the use of nuclear emulsions for the AEgIS position detector
- Contribution to the setting up of the cyclotron laboratory of the Bern Inselspital for isotope production and research
- Discovery of  $\nu_e$  appearance with the T2K experiment
- Discovery of the Higgs boson with the ATLAS experiment
- Contribution to the realization of LAr TPC based experiments at Fermilab (MicroBooNE and SBND)
- Discovery of  $\nu_\tau$  oscillation appearance with the OPERA experiment
- Initiative for an R&D project at CERN/Fermilab on a novel LAr TPC for DUNE (ARGONCUBE)
- Initiative for a new long baseline neutrino-oscillation project at Fermilab (LBNF/DUNE)
- First measurement of muon-antineutrino disappearance with the T2K experiment
- First proof of a pixelated readout for a LAr TPC (ARGONCUBE)
- First observation of antimatter quantum interferometry (QUPLAS)
- First indication ( $3\sigma$ ) for a non-vanishing CP violating phase in the PMNS mixing matrix (T2K)

## REVIEW PAPERS

- A. Ereditato, *Neutrino-Electron Scattering and  $\sin^2\theta_{ee}$* , Proc. of the 10<sup>th</sup> Int. Conf. on Physics in Collisions, Durham, 21-23 June 1990, Editions Frontieres, Gif-sur Yvette/World Scientific, Singapore (1990) 495.
- A. Ereditato, V. Palladino and P. Strolin, *The L'Enigma del Neutrino*, Sapere, Vol. 1 (1982), Ed. Dedalo (1996) 37.
- A. Ereditato and P. Migliozzi, *Accelerator Studies of Neutrino Oscillations*, La Rivista del Nuovo Cimento, Vol. 23, n. 12 (2000).
- A. Ereditato, *The Experimental Programme with the CNGS Neutrino Beam*, Nucl. Phys. B. Proc. Suppl., 100 (2001) 200.
- A. Ereditato, *The Future of Calorimetry in High Energy Physics*, Proc. of the 1<sup>st</sup> Int. Workshop on Charm, Beauty and CP, Frascati, 6-11 October 2002, Published in Frascati 2002, Charm, Beauty and CP, 335.
- A. Ereditato, *Present and Future of Neutrino Oscillation Experiments*, Eur. Phys. J. direct C4 (S1), (2002) 38.
- A. Ereditato, *Present Status and Perspectives of Neutrino Oscillation Experiments*, Proc. of the Int. Workshop on Heavy Quarks and Flavors, S. Juan de Puertorico, June 2004, Published in S. Juan 2004, Heavy Quarks and Leptons, 73.
- P. Checchia and A. Ereditato, *Particle Detectors for Future Collider Experiments*, IEEE Instrumentation and Measurement Magazine, Vol. 8, No. 2, June 2005, 27.
- A. Ereditato, *Calorimeter Issues Today*, Proc. of the 12<sup>th</sup> Int. Conf. on Calorimetry in High Energy Physics, Chicago, 5-9 June 2006, AIP Conf. Proc., New York, 2006, Vol. 867, XV-XXIV.

- A. Ereditato, *Future Neutrino Oscillation Experiments*, Proc. of the Vulcano Workshop 2006, Frontier Objects in Astrophysics and Particle Physics, Vulcano, 22-27 May 2006, SIF Conf. Proc., Bologna, Vol. 93 (2007) 555.
- A. Ereditato, *The Appearance of the Tau-Neutrino*, Il Nuovo Saggiatore, Vol. 26, 3-4 (2010) 5.
- A. Ereditato, *The study of neutrino oscillations with emulsion detectors*, Advances in High Energy Physics, Vol. 2013, Article ID 382172, 2013doi:10.1155/2013/38172.
- A. Ereditato, *The Discovery of the Appearance of  $\nu_\mu$ - $\nu_\tau$  oscillations*, Nucl. Phys. B. Vol. 908 (2016) 116.
- F. Cavanna, A. Ereditato and B.T. Fleming, *Advances in Liquid Argon Detectors*, Nucl. Instr. and Meth., A 907 (2018) 1.

## BOOKS

- G. De Lellis, A. Ereditato, K. Niwa, *Nuclear Emulsions*, The Handbook of Particle Physics, Springer, 2011.
- E. Amaldi, *The adventurous life of Friedrich Georg Houtermans, physicist (1903-1966)*, Edited by S. Braccini, A. Ereditato, P. Scamporrì, Springer Briefs in Physics, 2013.
- A. Ereditato, *Le Particelle Elementari*, Il Saggiatore, 2017.
- A. Ereditato, *The State of the Art of Neutrino Physics*, Advanced Series on Directions in High Energy Physics, Vol. 28, World Scientific, 2018.
- E. Boncinelli and A. Ereditato, *Il Cosmo della Mente*, Il Saggiatore, 2018.
- A. Ereditato, *Guida Turistica per Esploratori dello Spazio*, Il Saggiatore, 2019.
- E. Boncinelli and A. Ereditato, *L'Infinito Gioco della Scienza*, Il Saggiatore, 2020.

## COORDINATION OF SCIENTIFIC PROJECTS

- Napoli PI of the CERN SPACAL/LAA experiment (1988→1990)
- Napoli PI of the CERN RD1 experiment (1990→1992)
- Italian national PI of the INFN-ITEP FORWARD experiment (1992→1994)
- Napoli PI of the CERN RD46/ACTAR experiment (1995→1997)
- Project Leader for the construction of the CERN CHORUS calorimeter (1990→1993)
- Napoli PI of the CERN CHORUS experiment (1997→2001)
- Italian national PI of the CERN TOSCA project (1996→1998)
- Contact person of the CERN/LNGS OPERA project (1996→2002)
- Napoli PI of the European Union TMR-ERB-PL-97-0319 project (1997→2002)
- Napoli PI of the CERN/LNGS ICARUS experiment (2002→2006)
- Bern PI of the CERN ATLAS experiment (2006→2017)
- Bern PI of the CERN/LNGS OPERA experiment (2006→2008)
- Bern PI of the J-PARC T2K experiment (2006→2014)
- Bern PI of the EU 7FP project LAGUNA (2008→2011)
- Bern PI of the CERN NA61 experiment (2006→2016)
- Bern PI of the EU 7FP project LAGUNA-LBNO (2011→2013)
- Bern PI of the SBND project (2013→)
- Bern PI of the DUNE project (2014→)

## MANAGEMENT AND INSTITUTIONAL DUTIES

- Coordinator of the INFN-Napoli Electronics and Detector Workshop (1996→2004)
- Member of the ICARUS Editorial Board (2002→2005)

- Director of the High Energy Physics Laboratory (LHEP) at the Institute of Physics of the University of Bern (2006→)
- Co-director of the Physics Institute of the University of Bern (2006→)
- Member of Committees for Full, Associate and TT Assistant Professorships (Universities of Bern, Geneva, Politecnico Milano, Sandoz Foundation) (2006→)
- Member of the T2K Institute Board (2006→2014)
- Member of the ATLAS Collaboration Board (2006→)
- Chairperson of the OPERA Publication and Conference Board (2006→2008)
- Chairperson of the OPERA Collaboration Board (2007-2008)
- Member of the Executive Board of the Swiss Institute for Particle Physics (CHIPP) (2008→2010)
- Spokesperson of the OPERA Collaboration (2008→2012)
- Member of the T2K Speaker Committee (2008)
- Director of the Albert Einstein Center for Fundamental Physics, Bern (2011→2018)
- Deputy Dean of the Faculty of Sciences, University of Bern (2013→2015)
- Chairperson of the SBND International Board (2014→2017)
- Spokesperson of the ARGONCUBE project at CERN/Bern (2014→2019)
- Swiss representative of the LBNF/DUNE Collaboration Resource Board (2015→)
- Member of the SBND Publication Committee (2016→2018)
- Chairperson of the MicroBooNE International Board (2017→)
- Member of the SBN Oversight Board (2018→)
- Member of the Executive Board of the Albert Einstein Center (2018→)

#### SCIENTIFIC COMMITTEES

- CERN-INFN Technical Committee for the design of the CNGS neutrino beam (1997→2003)
- CERN Large Hadron Collider Scientific Committee (LHCC) (1997→2001)  
Member of the referee team of the LHCb experiment. Head referee for the ALICE experiment
- CERN Proto-Synchrotron and Super-Proton-Synchrotron Scientific Committee (SPSC) (2006→2010)
- Swiss National Science Foundation (SNSF) Council, Division II (2010→2017)
- Swiss National Science Foundation Professorship Committee (2011→)
- Program Advisory Committee (PAC) for High-Energy Physics of the Joint Institute for Nuclear Research (JINR) Dubna (2011→)
- Swiss National Science Foundation FAID Committee for Interdisciplinary Proposals (2012→2017)
- Fermilab interim International Executive Board (iIEB) for the Long Baseline Neutrino Facility (LBNF) (2014→2015)
- International Scientific Advisor Committee of the Fermilab Neutrino Physics Center (2016→)
- Member of the DOE International Neutrino Council for the LBL neutrino program (2016→)
- Member of the DUNE Finance Board Committee (2019→)

#### ORGANIZATION OF INTERNATIONAL CONFERENCES AND WORKSHOPS

- Int. Advisory Committee of the Int. Conf. on Calorimetry in Particle Physics (1991→) (Proponent and Scientific Secretary of the Conference series)
- Chairman of the II Int. Conf. on Calorimetry in Particle Physics (Capri 1991)
- Local Organizing Committee of the WIN97 Workshop (Capri, 1997)
- Int. Advisory Committee of the VI Int. Topical Seminar on Neutrinos and Astro-particle Physics (San Miniato, 1999)
- Organizing Committee of the Int. Workshop on Nuclear Emulsion Techniques (Nagoya 1998, 2002, 2008)

- Int. Advisory Committee of the Neutrino Conference Series (2008, 2012 editions)
- Chairman of the Organizing Committee of the 2008 ATLAS Overview Week (Bern 7-11 July 2008)
- Co-convenor of the Neutrino Detector Session of the TIPP 11 Conference on Instrumentation (Chicago, 2011)
- Int. Advisory Committee of the Workshop on Muon and Neutrino Radiography (2012 →)
- Int. Advisory Committee of the Workshop of Nuclear Track Emulsion and its Future (Sinaia, 14-19 October 2013)
- Local Organizing Committee of the II Int. Workshop on Antimatter and Gravity (Bern, 13-15 November 2013)
- Organizing Committee of the Strategy Workshop on Astroparticle in Switzerland (Geneva, 11-13 June 2014)
- Program Committee of the Workshop for Neutrino Programs with Facilities in Japan (J-PARC 4-6 August 2015)

### MEMBERSHIP OF SOCIETIES

- Fellow Member of IoP (Institute of Physics, UK→2017)
- Member of the Swiss Physical Society (SPS)
- Member of the Italian Physical Society (SIF)
- Member of the Pro ISSI (International Space Science Institute) association, Bern; Revisor (2009→2010)
- Member of the Aspen Institute Italy - Italian Talents Abroad (2011→)
- Member of the Jury of the Literary Prize Città di Caccuri (2012→)
- Member of the Società Dante Alighieri, Comitato di Berna
- Member of the Accademia delle Scienze dell'Umbria (2018→)
- President of the Società Accademici Italiani in Svizzera (SAIS) (2018→)
- Member of the Rotary Club eClub DUEMONDI Spoleto (2019→)
- Ordinary Member of the Aspen Institute Italy (2019→)

### PEER REVIEW ACTIVITIES

- Reviewer of EU INTAS Proposals (2000→2006)
- Reviewer for the Italian Research Ministry: funding of projects on Particle Physics (1999→2004)
- Reviewer for the European Research Council, Panel in Universe Sciences (PE9) (2009 →)
- Reviewer for the Romanian National Research Council (2012 →)
- Reviewer for the Italian Ministry of Education and Research (2012 →)
- Reviewer for the French CNRS (2018→)
- Reviewer for the Dutch FOM (2019→)

### EDITORIAL AND REFEREEING ACTIVITIES

- Editor of the Proceedings of the II Int. Conference on Calorimetry in High Energy Physics, Capri, October 14-18, 1991, World Scientific Co. Pte. Ltd, 1992
- Member of the Editorial Board of the New Journal of Physics (2004→2012)
- Editor of a New Journal of Physics focus issue on "Physics at the TeV scale": 2007 New J. Phys. 9.
- Member of the Editorial Board of Advances in High Energy Physics (2016)
- Editor-in-Chief of Instruments (MDPI) (2016→)
- Referee of international journals of physics: Physics Letters, Journal of High Energy Physics, Nuclear Instruments and Methods, Journal of Instrumentation, Nuclear Physics, Radiation Measurements,

Geophysical Research Letters, Journal of Geophysical Research, Journal of Volcanology and Geothermal Research, International Research Journal of Pure and Applied Chemistry

- Columnist of Il Riformista (Italian newspaper)

## TEACHING

### Graduate school courses at INFN:

- Massive Neutrinos, Physics PhD Course, Federico II University, Napoli (1996)
- Neutrino Physics, Physics PhD Course, Salerno University (1997)
- Astroparticle Physics, Physics PhD Course, Federico II University, Napoli (1998→2004)

### Courses at the University of Bern:

- Elementary particle physics (Bachelor program)
- The physics of massive neutrinos (Master program)
- Advanced methods in experimental particle physics (Master program)
- Complements of experimental particle physics (Master program)
- Astroparticle physics (Master program)

### Schools:

- Calorimetry in HEP, II Giornate di Studio sui Rivelatori, Torino University (February 1992)
- Neutrino Physics, II Int. Winter School on HEP, Rio de Janeiro (July-August 1996)
- CHIPP School of Particle Physics, Co-organizer of the 2008 and 2010 editions
- Neutrino Experiments, FLAVIANET School on Flavor Physics, Bern (June-July 2010)
- Neutrino Physics, CERN Academic Training, CERN Geneva (April 2012)
- Les Vacances de l'Esprit, Madonna di Campiglio (July 2012)
- Neutrino Experiments, V Int. Pontecorvo Neutrino Physics School, Alushta, Ukraine (September 2012)
- Diploma e Master Universitario di Alti Studi Europei, Collegio Europeo di Parma (April 2017)
- The International Neutrino Program at Fermilab, IPM School and Conference on Particle Physics, Tehran (September 2015)
- Diploma e Master Universitario di Alti Studi Europei, Collegio Europeo di Parma (May 2018)
- Diploma e Master Universitario di Alti Studi Europei, Collegio Europeo di Parma (February 2019)

### Theses supervision:

- Laurea: G. Fiorillo, S. Buontempo, F. Riccardi, A.G. Cocco, S. Mennella, V. Barassi, M. Messina, P. Migliozzi, G. De Lellis, R. Listone, P. Paolucci, R. Peluso, G. Sorrentino, V. Gallo, M. Della Pietra.
- Master: M. Zeller, J. Casutt, S. Delaquis, S. Studer, T. Kruker, Ch. Rudolph von Rohr, S. Burla, M. Nirkko, A. Blatter, L. Buetikofer, D. Göldi, M. Lüthi, M. Schenk, B. Gerber, M. Häberli, E. Kirillova, S. Joos, K. Zihlmann, M. Hostettler, M. Mostafaei, Y. Bandi, T. Mettler, S. Käser, F. Stocker, P. Köller, R. Berner.
- PhD: G. Fiorillo, F. Garufi, P. Migliozzi, B. Rossi, J. Knuesel, C. Topfel, N. Venturi, I. Badhrees, V. Gallo, C. Borer, E. Frank, T. Kruker, F. Bay, M. Zeller, M. Agustoni, F. P. La Torre, B. Schneider, L. Marti, C. Severino, S. Tufanli, M. Bucciantonio, S. Stucci, M. E. Stramaglia, K. Nesteruk, A. Ehtesham, D. Göldi, G. D'Amen, G. Mullier, M. Hostettler, M. Rimoldi, A. Redij, Y. Chen.



## OUTREACH: SELECTION OF TALKS AND EVENTS (IN ITALY)

- Futuro Remoto, Città della Scienza, Napoli (September 2011)
- Meeting delle Due Culture, BIOGEM, Ariano Irpino (September 2012, 2013, 2014, 2015, 2016, 2017, 2018)
- Associazione Allievi Scuola Superiore Sant'Anna, Pisa (Giugno 2012)
- Congresso Nazionale AIF, Napoli (Ottobre 2012)
- I Giorni della Scienza, Lucca (Marzo 2013)
- Pensiero in Evoluzione, Borgo Valsugana (April 2014)
- Associazione Caduceo, Perugia (April 2015)
- Virtual Immersion in Science, Scuola Normale Superiore, Pisa (June 2015)
- Link Campus University, Roma (May 2016)
- Incontro con la Scienza, Liceo Vallisneri, Lucca (September 2017)
- Conservatorio Musicale, Perugia (December 2017)
- IIT- Istituto Italiano Tecnologia, Genova (December 2017)
- BookCity, Milano (January 2018)
- Pomeriggi da Romanzo, Borgo Valsugana (February 2018)
- I Lincei per la Scuola, Napoli (March 2018)
- VIII Festa Scienza e Filosofia, Foligno (April 2018)
- Gutenberg 2018, Catanzaro (May 2018)
- Scrittoreincittà, Cuneo (November 2018)
- Pensiero in Evoluzione, Borgo Valsugana (November 2018)
- Science and Society, Milano Bicocca University, Milano (January 2019)
- AAA Giovani Scienziati Cercansi, Caccuri (January 2019)
- Accademia delle Scienze dell'Umbria, Perugia (February 2019)
- Università degli Stranieri, Perugia (February 2019)
- Inauguration talk for the new Science and Technology Department, Università del Sannio, Benevento (March 2019)
- Rotary Club Sulmona, Sulmona (March 2019)
- European Youth Debate, Bocconi University, Milano (April 2019)
- Lyceum Club, Neuchâtel (October 2019)
- Rotary Club Crotone (December 2019)