IDENTIFYING INFORMATION:

NAME: Petti, Roberto

ORCID iD: https://orcid.org/0000-0002-5361-4562

POSITION TITLE: Professor

PRIMARY ORGANIZATION AND LOCATION: University of South Carolina, Columbia, SC , United States

Professional Preparation:

ORGANIZATION AND LOCATION	DEGREE (if applicable)	RECEIPT DATE	FIELD OF STUDY
University of Pavia, Pavia, IT, Italy	Postdoctoral Fellow	05/1998 - 12/1998	Particle Physics
University of Pavia, Pavia, IT, Italy	PHD	05/1998	Particle physics
S. John's college, Cambridge, UK , UK	BS	09/1993	Physics
Collegio Ghislieri, Pavia, IT, Italy	BS	09/1994	Physics
University of Pavia, Pavia, IT, Italy	BS	06/1994	Particle physics

Appointments and Positions

2018 - present	Professor, University of South Carolina, Columbia, SC , United States
2021 - present	Honorary Professor , Indian Institute of Technology, Guwahati, India
2011 - 2018	Associate Professor, University of South Carolina, Columbia, SC , United States
2005 - 2011	Assistant Professor, University of South Carolina, Columbia, SC , United States
2001 - 2005	Research Staff in Physics Department , CERN, Geneva, Switzerland
1999 - 2001	Research Fellow in Physics Department, CERN, Geneva, Switzerland

Products

Products Most Closely Related to the Proposed Project

1. Petti R. Probing free nucleons with (anti)neutrinos. Phys. Lett. B 834 (2022) 137469, arXiv:2205.10396 [hep-ph]. 2022.
2. Duyang H, Guo B, Mishra S, Petti R. A precise determination of (anti)neutrino fluxes with (anti)neutrino-hydrogen interactions. Phys. Lett. B 795, (2019) 424, arXiv:1902.09480 [hep-ph]. 2019.
3. Abed Abud A, et al. [DUNE Collaboration]. Deep Underground Neutrino Experiment (DUNE) near detector conceptual design report. Instruments 5, no.4 (2021) 31, arXiv:2103.13910 [physics.ins-det]. 2021.
4. Acero M, et al. [NOvA Collaboration]. First measurement of neutrino oscillation parameters using neutrinos and antineutrinos by NOvA. Phys. Rev. Lett. 123, no.15 (2019), 151803, arXiv:1906.04907 [hep-ex]. 2019.
5. Petti R, Tomalak O, Hill R. Nucleon axial-vector form factor and radius from future neutrino experiments. Phys. Rev. D 109 (2024) L051301, arXiv: 2309.02509 [hep-ph]. 2024.

Other Significant Products, Whether or Not Related to the Proposed Project

1. Kulagin S, Petti R. Global study of nuclear structure functions. Nucl. Phys. A 765 (2006) 126-187, arXiv:hep-ph/0412425 [hep-ph]. 2006.

2. Samoylov O, Petti R, et al. [NOMAD Collaboration]. A precision measurement of charm dimuon production in neutrino interactions from the NOMAD experiment. Nucl. Phys. B 876 (2013) 339-375, arXiv:1308.4750 [hep-ex]. 2013.
3. Duyang H, Guo B, Mishra S, Petti R. A novel approach to neutrino-hydrogen measurements. Eur.Phys.J.Plus 139 (2024) 1014, arXiv:1809.08752 [hep-ph]. 2018.
4. Kulagin S, Petti R. Neutrino inclusive inelastic scattering off nuclei. Phys. Rev. D 76 (2007) 094023, arXiv:hep-ph/0703033 [hep-ph]. 2007.
5. Abat E, et al. [ATLAS TRT Collaboration]. The ATLAS TRT end-cap detectors. JINST 3 (2008) P10003. 2008.

The broad impact of the research activity is reflected in 84 invited talks at conferences/workshops, and 30 invited research seminars at various institutions.

R. Petti regularly serves as a scientific referee for the journals Physics Letters B, Nuclear Physics A, Nuclear Physics B, Journal of Physics G, IEEE Transactions, Annals of Nuclear Energy and The Astrophysical Journal, Journal of Instrumentation, European Physical Journal. He has also been serving as a reviewer of various funding proposals for the Department of Energy (DOE), USA, and NSERC, Canada.

Scientific Activity

- Detector construction and operation, simulations, event reconstruction and data analysis in the NOMAD neutrino experiment at CERN (1994-present).
- Phenomenological studies on cross-sections, structure functions, parton distributions and nuclear effects (2003-present).
- Proposal, design, R&D, and performance study of a high resolution near detector for the LBNE/DUNE neutrino project (2008-present).
- Operation, simulations and data analysis in the NOvA neutrino experiment (2012-present).
- Board member of the Neutrino Scattering Theory Experiment Collaboration (NuSTEC), with organization of schools, workshops, papers and research projects (2015-present).
- Study of physics measurements at the future Electron Ion Collider (EIC) and their synergies with precision measurements of (anti)neutrino interactions in DUNE (2019-present).
- Contributions to the Indo-US Collaboration on Neutrino Physics (2012-present).
- Contributions to the DRD1 at CERN with dedicated straw tracker R&D (2024-present).
- Contributions to the THEIA neutrino project (2022-present).
- Contributions to the CNGS neutrino project at CERN (2001).
- Work to the detector R&D and to both hardware and software of the ATLAS Inner Detector and Muon System at the LHC at CERN (2003-2010).

Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Petti, Roberto in SciENcv on 2025-08-02 15:10:00