

Curriculum Vitae: Roberto Petti

Education

- Laurea in Physics (1989-1994) -
obtained at the Pavia University in June 1994 (110/110 cum laude).
- PhD in Particle Physics (1995-1998) -
obtained at the Pavia University in May 1998.

During his years of university education R. Petti was resident at the Collegio Ghislieri in Pavia (1989-1995) after passing the admittance examinations and at St. John's College in Cambridge, UK (summer 1993).

Positions

- 1998 - 1999** Post-doc Fellow at the Pavia University.
- 1999 - 2001** Research Fellow in the Physics department at CERN.
- 2001 - 2005** Research Physicist in the Physics department at CERN.
- 2005 - 2011** Assistant Professor at the University of South Carolina, USA.
- 2011 - date** Associate Professor at the University of South Carolina, USA.

Scientific Activity

- Work related to detector construction, event reconstruction and data analysis in the NOMAD experiment at CERN (1994-present).
- Phenomenological studies on neutrino cross-sections, parton distributions and nuclear effects on structure functions (2003-present).
- Proposal and design of a high resolution neutrino detector for the LBNE project (2007-present)
- Work for the CNGS project at CERN (2001).
- Work to the detector R&D (1993) and to both hardware and software of the ATLAS Inner Detector (2003-2005) and Muon System (2007-2011) at CERN.
- Study of Concentrating Photovoltaic systems (2008-present)

Publications

R. Petti is co-author of 75 scientific papers published on international journals. His research activity is also documented by 35 invited talks at conferences and workshops.

A selection of scientific publications (listed in inverse chronological order) includes:

- T. Akiri et al [LBNE Collaboration], LBNE-PWG-004, arXiv:1110.6249 [hep-ex], ‘The 2010 Interim Report of the Long-Baseline Neutrino Experiment Collaboration Physics Working Groups.’
- S. Kulagin and R. Petti, Phys. Rev. C 82 (2010) 054614, arXiv:1004.3062 [hep-ph], ‘Structure Functions for Light Nuclei.’
- S. Alekhin, S. Kulagin, R. Petti, DESY-08-185, SFB-CPP-08-99, arXiv:0812.4448 [hep-ph], Physics Letters B 675 (2009) 433-440, ‘Determination of Strange Sea Distributions from Neutrino-Nucleon Deep Inelastic Scattering.’
- S.R. Mishra, R. Petti, C. Rosenfeld, PoS SISSA (Nufact08) (2008) 069, arXiv:0812.4527 [hep-ex], ‘A High Resolution Neutrino Experiment in a Magnetic Field for Project-X at Fermilab.’; Letter of Intent submitted to Fermilab on February 2008, LOI-08-02-18.
- E. Abat et al. [ATLAS-TRT Collaboration], Journal of Instrumentation (JINST), 3 (2008) P2013, ‘The ATLAS Transition Radiation Tracker (TRT) proportional drift tube: design and performance’.
- Q. Wu et al. [NOMAD collaboration], Phys.Lett.B660 (2008) 19-25, arXiv:0711.1183 [hep-ex], A Precise measurement of the muon neutrino-nucleon inclusive charged current cross-section off an isoscalar target in the energy range $2.5 < E_\nu < 40$ GeV by NOMAD.’
- S. Alekhin, S.A. Kulagin and R. Petti, arXiv:0710.0124 [hep-ph], ‘Modeling lepton-nucleon inelastic scattering from high to low momentum transfer’
- S.A. Kulagin and R. Petti, Phys. Rev. D 76 (2007) 094023 (hep-ph/0703033), ‘Neutrino inclusive inelastic scattering off nuclei.’
- S. Kulagin and R. Petti, Nucl. Phys. A 765 (2006) 126-187 (hep-ph/0412425), ‘Global Study of Nuclear Structure Functions.’
- P. Astier et al. [NOMAD collaboration], Nucl. Phys. B 611 (2001) 3-39 (hep-ex/0106102), ‘Final NOMAD results on $\nu_\mu \rightarrow \nu_\tau$ and $\nu_e \rightarrow \nu_\tau$ oscillations including a new search for ν_τ appearance using hadronic τ decays.’

R. Petti served as referee for the international physics journals Physics Letters B, Nuclear Physics B, IEEE Transactions and Annals of Nuclear Energy.

Research Supervision

R. Petti has supervised a total of 2 post-docs, 6 graduate students and 7 undergraduate students.