

Curriculum Vitae of Fernando Ferroni

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Born: January 12, 1952 in Roma, Italia

Citizenship: Italian

Academic Career:

2000 - present Professor, Sapienza Università di Roma , Roma
1998 - 1999 Visiting Scientist, SLAC, Stanford, USA
1992 - 1999 Associate Professor, Università di Roma "La Sapienza", Roma
1991 - 1992 Visiting Scientist, CERN , Geneva, Switzerland
1988 - 1991 Associate Professor, Università di Ancona, Ancona
1982 - 1988 Assistant Professor, Università di Roma "La Sapienza", Roma
1977 - 1982 Research Associate, INFN-Roma

Research Activity Summary

1974-1979 R107-R208 experiment at CERN-ISR:

In charge of the lead glass calibration. Search for resonances decaying in two photons. Single gamma production analysis.

1979-1988 WA18 (CHARM) Experiment at CERN SPS:

Scintillator calorimeter construction. Streamer tube upgrade. Analysis of beam dump experiment. Leading role in the study of nucleon structure functions from neutrino scattering with extraction of QCD parameters from Q^2 behavior. Author of a review on nucleon structure functions (Phys Rept. 1986). Author of a parametrization of parton densities for use at collider experiments (DFLM, cited 369), a monography on Neutrino Interactions (in Cambridge Monogr. Part. Phys. Nucle. Phys. Cosmology, 1991) and a textbook for students (together with L. Maiani)

1986-1997 L3 Experiment at CERN LEP:

Responsible of the BGO calorimeter calibration, Analysis of the Z line-shape. Project leader of the scintillating fiber calorimeter construction, installation and operation.

1991-1993 RD22 Experiment at CERN SPS:

Extraction of a proton beam from SPS by a bent Si crystal by channeling.

Presentation of the LHB project to CERN LHCC.

1994- 2008 BaBar Experiment at SLAC:
Design, construction and operation of the BaBar detector Project leader of the Aerogel PID system. In charge of the tooling for robotic stringing of the Drift Chamber. Member of the management team of Drift Chamber.. System Manager of the Instrumented Flux Return detector. Physics Analysis Coordinator. Member of the Executive board. Member of the Technical Board. Main results: discovery of CP violation in B-physics , discovery of new families of hadronic resonances , direct CP violation in B-physics , observation of D0 oscillations, discovery of η_b state.

2004-present CUORE Experiment at LNGS:
Neutrinoless Double Beta decay project_ Responsible for the TeO2 crystal calorimeter. Member of the Executive Board.

2009 Winner of an ERC Advanced Grant for an experiment on Double Beta Decay based on ZnSe crystals with simultaneous readout of heat and scintillation.

Committees :

2000- 2005 Member of Scientific Committee of Laboratori Nazionali del Gran Sasso-

2001-2004 Member of Large Hadron Collider Committee (LHCC) at CERN

2005-present Member of Modane-Frejus Laboratory Scientific Committee

2004-2011 Chair of Commissione Scientifica Nazionale I of INFN

2008-present Member of the Joint Standing Committee for the China CAS – Italy INFN Virtual Laboratory

2009 Member of the Scientific Coordination Committee of INFN

2011-present Member of the Conseil Scientifique of IN2P3

Conferente and School Organization :

International Advisory Committee (and co-founder together with P. Schlein) Beauty Series (International Conference on B-Physics at Hadron Machines (since 1993)

Organization Committee XX International Symposium on Lepton and Photon Interactions at High Energies July 23-28, 2001 Roma

International Advisory Committee Frontier Detectors for Frontier Physics, La Biodola (Isola d'Elba) (since 2006)

International Advisory Committee DIF 06 February 28-March 03, 2006 Frascati

International Advisory Committee CKM 2008 September 9-13, 2008 Roma

Chair of the organization for The Legacy of E. Amaldi in Science and Society Conference October 23-25, 2008 Roma

Director of the school Measurement of Neutrino Mass (Course CLXX) at International School of Physics 'Enrico Fermi' , 17-27 June, 2008, Varenna

International Advisory Committee WIN (since 2009)

Director of the school Laser-Plasma Acceleration (Course CLXXIX) at International School of Physics 'Enrico Fermi' , 20-25 June, 2011, Varenna

Academic career of students supervised

in CHARM: Sivio Morganti (Primo Ricercatore INFN Roma), Roberta Santacesaria (Primo Ricercatore INFN Roma), Marcella Diemoz (Dirigente di Ricerca INFN Roma)

in L3: Claudia Cecchi (Ricercatore Universitario Perugia), Mario Campanelli (Academic staff at UC London), Simone Paoletti (Ricercatore INFN Firenze)

*in BaBar:*Shahram Rahatlou (Professore Associato Roma), Gianluca Cavoto (Ricercatore INFN Roma), Marco Serra (Tecnologo INFN Roma), Francesco Safai-Teherani (Tecnologo INFN Roma), Daniele del Re (Ricercatore Universitario Roma), Cecilia Voena (Ricercatore INFN Roma), Marcello Rotondo (Ricercatore INFN Padova), Maurizio Pierini (5-year CERN Staff), Alessio Sarti (Ricercatore Universitario Roma), Viola Sordini (DR2 Lyon), Francesco Polci (DR2 Grenoble)

the following students have now a PostDoctoral position: Alessia D'Orazio (Roma), Elisabetta Baracchini (KEK), Francesco Renga (PSI), Francesca Bucci (Firenze), Luigi LiGioi (Clermont Ferrand), Silvia Pisano (LNF), Antonino Sergi (CERN), Emanuele di Marco (Caltech), Elisabetta Prencipe (Mainz), Francesca Pastore (CERN), Nicola Giacinto Piacquadio (CERN)

in CUORE: Fabio Bellini (Ricercatore Universitario Roma) , Marco Vignati (PostDoc in Roma), Filippo Orio (PostDoc in Roma)

Invited lectures

Dozens of talks given in national and international institutes, workshops schools and conferences. A few opening and summary talks.

Bibliometric indexes

>700 papers published on refereed journal, total number of citations > 20000, h-index >70 (source : INSPIRE)

A selection of papers (one per topics/project)

Experimental Study of the Nucleon Structure Functions and of the Gluon Distribution from Charged Current Neutrino and anti-neutrinos Interactions

CHARM Collaboration (F. Bergsma et al.).
Phys.Lett. B123 (1983) 269. (cited 135)

Nucleon Structure Functions From Neutrino Scattering

M. Diemoz, F. Ferroni, E. Longo.
Phys.Rept. 130 (1986) 293-380. (cited 45)

Parton Densities from Deep Inelastic Scattering to Hadronic Processes at Super Collider Energies

M. Diemoz, F. Ferroni, E. Longo, G. Martinelli.
Z.Phys. C39 (1988) 21. (cited 379)

A Determination of the Properties of the Neutral Intermediate Vector Boson Z^0

L3 Collaboration (B. Adeva et al.).
Phys.Lett. B231 (1989) 509. (cited 271)

First results on proton extraction from the CERN SPS with a bent crystal

H. Akbari et al.. (RD22)
Phys.Lett. B313 (1993) 491-497. (cited 80)

Observation of CP violation in the B^0 meson system

BABAR Collaboration (Bernard Aubert et al.).
Phys.Rev.Lett. 87 (2001) 091801. (cited 510)

Flavor Physics in the Quark Sector

Mario Antonelli, et al..
Phys.Rept. 494 (2010) 197-414. (cited 90)

Production of high purity TeO_2 single crystals for the study of neutrinoless double beta decay

Arnaboldi C. et al. (CUORE)
Journal of Crystal Growth 312 (2010) 2999-3008 (cited 4)

Discrimination of alpha and beta/gamma interactions in a TeO_2 bolometer

J.W. Beeman, et al.. (Lucifer)
arXiv:1106.6286