

Curriculum Vitae of Stefano Ragazzi

Date of Birth/Place November 21 1954, Milano, Italy
Nationality Italian

Current/Past positions

2006-present **Professor**, University of Milano-Bicocca, Milano
2000-2006 **Associate Professor**, University of Milano-Bicocca, Milano
1992-2000 **Associate Professor**, University of Milano, Milano
1990-1992 "**Primo Ricercatore**" (2nd level, intermediate, of research position in INFN), INFN Sezione di Milano, Milano
1983-1990 **Researcher**, INFN, Sezione di Milano, Milano
1979-1982 **Research fellowship**, University of Milano, Milano

Main Responsibilities in Organization

- Since Oct. 15, 2012 Director of INFN Laboratori Nazionali del Gran Sasso
- 2009-present member of INFN Board of Directors (Consiglio Direttivo)
- 2009-2012 Director of INFN Sezione di Milano-Bicocca
- 2006-2012 Chair of the Coordination Board of Physics and Astrophysics Courses in Milano-Bicocca University
- 2006-2012 Member of the Council (Consiglio di Presidenza) of the Faculty of Sciences of Milano-Bicocca University

Research Performance

Research grants:

- 2013 ERC Grant: PI of HOLMES The Electron Capture Decay of ^{163}Ho to Measure the Electron Neutrino Mass with sub-eV sensitivity. Funded with 3,057,067 Euro by the European Research Council.
- PRIN 2010-2011: P.I. of a Project for "Development of ultra-high radiopure detectors to probe the neutrino nature and mass through double beta decay" involving Research Units of Milano-Bicocca, Roma La Sapienza, Roma Tre, Genova, Padova, INFN; Funded with 1,020,600 Euro
- PRIN 2005 (Italian Ministry of Research 2-year Grant): Responsible of Milano-Bicocca Research Unity (P.I. Prof. Sandro Centro, Padova University); Milano-Bicocca Unity funded with 128,000 Euro.

Publications:

- [More than 600 publications](#) in refereed international journals with over 35,000 citations with 6 papers exceeding 500 citations; $h_{\text{HEP}} \text{ index} \geq 84$ – Source Inspire.net, August 2014. Numerous publications in refereed conference proceedings. Several oral presentations at international conferences and schools.

Career supervision: 7 PhD students and 15 Master students at the Department of Physics, University of Milano-Bicocca.

Main Responsibilities in Coordination of Research

- 1992-2000 Project Leader of the HPC Electromagnetic Calorimeter in the DELPHI experiment at the LEP collider at CERN
- 1996-1998 Spokesperson of the SPY/NA56 Experiment at CERN SPS
- 1997 Coordinator of a test exposure of a 50 litres liquid argon chamber to the WANF neutrino beam in CERN
- 2000-2001 Spokesperson of the MONOLITH collaboration (project of an atmospheric neutrino magnetic spectrometer)
- 2004-2009 Coordinator of Milano-Bicocca research activity in the CMS experiment at CERN LHC, and member of CMS Institution Board

- 2007-2009 National coordinator of INFN activities in construction and commissioning of the ECAL electromagnetic calorimeter of the CMS detector at CERN LHC
- 2007-2010 Deputy-Chair of the ECAL Institution Board and Finance Board
- 2007-2010 Member of the ECAL Steering Committee

Research Activity

- 1978-1979 WA14 experiment at CERN-SPS
High-energy neutrino interactions in Gargamelle bubble chamber: study of charm production with di-muon events (Thesis); search for three-flavour neutrino oscillations; inverse muon decay (V-A test).
- 1980-1986 NUSEX experiment in the Mt. Blanc underground laboratory
A 150 ton tracking calorimeter mainly devoted to search for proton decay. Test and commissioning of the detector; development and commissioning of the trigger system. Search for proton decay; study of high-energy cosmic rays; search for magnetic monopoles; leading role in analysis of atmospheric neutrino fluxes.
- 1987-1989 Double beta decay of ^{136}Xe .
Search for 2-neutrino and neutrinoless double-beta decay of ^{136}Xe with a multi-cell proportional counter in the Gran Sasso underground laboratory. The measurement exploited the comparison of two samples of 9 kg of gaseous Xenon: one enriched in the ^{136}Xe isotope and one depleted. Leading role in detector commissioning and data analysis.
- 1983-2000 DELPHI experiment at the LEP electron-positron collider in CERN
Study, design, test, construction and calibration of the HPC electromagnetic calorimeter. Project leader of HPC from 1992 to 2000. Main achievements as project leader: definition of a detector working point ensuring linear energy response and limited aging, detector calibration and equalization procedure, operation of 2nd level trigger. Analysis of Z line shape and its partial width in e^+e^- .
- 1996-1997 SPY/NA56 experiment at CERN
The experiment measured secondary particle yields for 450 GeV protons on beryllium targets. Its main goal was an improvement in the understanding of high-energy neutrino beam spectra and composition. Spokesperson. Definition of physics goals, data-taking programme, optimization of experimental set-up.
- 1997-1998 test of a liquid argon detector prototype on the WANF neutrino beam in CERN.
The main goal of this test was to assess the sensitivity of a liquid argon detector to tau-neutrino appearance in a muon-neutrino beam.
Test coordinator. Presentation and discussion for approval with INFN (CSN-II) and CERN (SPSC) scientific committees.
- 1999-2001 MONOLITH project
Spokesperson. A project for a 35 kton magnetized iron detector for atmospheric neutrinos. The experiment was designed for a precision measurement of the dominant neutrino oscillation parameters in muon-neutrino disappearance. Moreover, after six years of data taking, with an analysis of matter-enhanced transitions it could afford a sensitivity to $\sin^2\theta_{12} > 0.03$ and determine the neutrino mass hierarchy. The project was rejected by INFN after the decision of focussing on oscillation physics with long baseline beams.
- 2002-present CMS experiment at CERN LHC
Responsible of the Milano-Bicocca group in 2004-2009. In the construction phase the activity of the group concentrated on barrel electromagnetic calorimeter ECAL-B. Main responsibilities were: the design, construction and test of the cooling system; ECAL calibration procedures; pre-calibration and test with cosmic rays in the commissioning phase. Editor of a paper on measurement of muon stopping power in Lead Tungstate, at the end of the detector commissioning phase (2009).
CB member in 2004-2009; Deputy-Chair of the ECAL Institution Board and Finance Board 2007-2010; Member of the ECAL Steering Committee 2007-2010; national Coordinator of INFN-ECAL activities in 2007-2009.

Main interests in physics analysis: search of Standard Model Higgs; physics beyond Standard Model. Supervisor of five Ph.D. Thesis in CMS: Search for ADD Extra Dimensions (A. Ghezzi, 2004); Search for Standard Model Higgs in the $H \rightarrow WW(*)$ channel (C. Rovelli, 2006, awarded with the CMS Thesis Award); Beyond Standard Model Physics, Search for Supersymmetries and Extra Dimensions (L. Sala, 2009); Search for Standard Model Higgs in the $H \rightarrow WW$ Channel (A. Benaglia, due by June 2012); Search for VBF production of Standard Model Higgs Decaying in the $WW(*) \rightarrow 2$ leptons + 2 neutrino Channel (A. Massironi).