

Mario Sitta

Curriculum vitae

PERSONAL DATA

Born in Torino
Resident in Torino

BIO AND EDUCATION

- 1986: High school certificate of Maturità scientifica (60/60) at L.S. "Nicolò Copernico" in Torino
- 1991: degree in Physics (110/110 cum laude and "menzione onorevole") at University of Torino
- April-September 1991: collaboration with Gran Sasso National Laboratories for development of monitoring software
- 1992-1994: PhD in Physics (VII Cycle) at University of Torino
- 1995-1997: post-doc grant at the Torino Local Unit of the Istituto Nazionale di Fisica Nucleare
- 1997: grant at University of Torino
- June 1998: employed as Researcher with a permanent position at the University of Piemonte Orientale in Alessandria
- July-December 2008: on leave of absence at the CERN Laboratories in Geneva
- 2009-2012: Local Coordinator for Gruppo III at the Torino Local Unit of the INFN

UNIVERSITY CAREER

1998-	Researcher, University of Piemonte Orientale
1995-1997	Post-doc, INFN Local Unit of Torino

SCIENTIFIC POSITIONS

1992-2000	Member of the Rare Particle Working Group, member of the Technical Board, MACRO experiment
1998-2000	Run coordinator, MACRO experiment
2007-	In charge of the ITS geometry, ALICE experiment
2008-2009	In charge of the DAQ of the SDD detector, ALICE experiment
2009-	Subsystem Run Coordinator of the SDD detector, ALICE experiment
2009-2012	Local Coordinator for Gruppo III in the Local Unit of INFN in Torino
2009-2015	Referee for the experiments ASFIN2 and PRISMA2 in the Scientific Panel "Commissione III" of the INFN

MAIN FIELDS OF INTEREST

1. Particle Physics: Study of the cosmic-ray muons
2. Particle Physics: Search for magnetic monopoles in the cosmic radiation, detection of the catalysis of the nucleon decay
3. Nuclear Physics: Relativistic ion interaction, study of the Quark-Gluon Plasma
4. Software: Development of simulation code for particle detectors
5. Software: Medical applications of software developed for the analysis of Nuclear Physics events

CURRENT ISSUES OF RESEARCH

1. Analysis of the data collected by the ALICE experiment at CERN during Run1 and Run2

Analysis of the data collected by the ALICE experiment at LHC since 2010 in pp, pPb and PbPb collisions, in particular using the silicon Inner Tracking System. Analysis of cosmic-ray multi-muon events collected by ALICE during the no-beam periods, in particular simulation of high multiplicity events and comparison with real data.

2. Development of detectors for the ITS Upgrade of the ALICE experiment at CERN

Development of simulation software for the design and construction of the new Inner Tracking System that will be installed in ALICE during the Long Shutdown 2. In particular study of the material budget and its optimization in order to reduce the distortion in particle propagation.

3. Software development for the data acquisition handling of the SDD detector in the ALICE experiment

Development of the VHDL firmware running on the acquisition boards of the Silicon Drift Detector in order to implement new features. Hardware and software setup of a test station reproducing to scale the SDD system to allow the test of new firmware versions before their installation in the experiment.

CURRENT FUNDED PROJECTS

BANDO	TITOLO DEL PROGETTO
Large Hadron Collider Committee (LHCC) del CERN, Ginevra (CH); <i>Italian Funding Agency: Istituto</i>	ALICE - A LARGE ION COLLIDER EXPERIMENT http://alice-collaboration.web.cern.ch/ The ALICE Collaboration realized a detector simed to the study of heavy-ion physics exploiting the nucleus-nucleus collisions at the LHC energies. The aim is to study the hadronic matter physics at very high energy densities, where the formation of a new state of matter, the

Nazionale di Fisica Nucleare, Frascati.	Quark-Gluon Plasma, is expected. The existence and properties of this new state are crucial in the QCD to understand the confinement and restoration of the chiral symmetry.
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TOP FIVE PAPERS

1. MACRO Collaboration, *Search for nucleon decays induced by GUT magnetic monopoles with the MACRO experiment*, Eur. Phys. J. **C26** (2002) 163
2. MACRO Collaboration, *Atmospheric neutrino oscillations from upward throughgoing muon multiple scattering in MACRO*, Phys. Lett. **B566** (2003) 35
3. NA50 Collaboration, *A new measurement of J/ψ suppression in Pb-Pb collisions at 158 GeV per nucleon*, Eur. Phys. J. **C39** (2005) 335
4. ALICE Collaboration, *The ALICE experiment at the CERN LHC*, J. Inst. **3** (2008) S08002
5. ALICE Collaboration, *J/ψ suppression at forward rapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV*, Phys. Rev. Lett. **109** (2012) 072301