

● WORK EXPERIENCE

2003 – CURRENT

SENIOR RESEARCH TECHNOLOGIST – Istituto Nazionale Fisica Nucleare Sezione di Roma

- Member of LHCb (CERN) and DarkSide (LNGS) collaboration
- MICRO (coMpaact-electronIcs soC paRticle-detectors and biOluminescence) approved 2020 (2021-2022) CSN5 INFN experiment **National INFN coordinator**.
- SLICE 2019 CSN5 INFN experiment (Soc eLectronIcs Compact dEtector), development of handy photon detection device **National INFN coordinator**.
- IEEE Transactions on Nuclear Science Journal Reviewer.
- Member of Chirone INFN experiment: development of an intraoperative beta radiation probe for brain tumors (**intra operative probe Patent INFN owner 90 %**).
- **INFN Rome coordinator** of INFN Cosmic ray Outreach activity.
- **RSU representative** (Unitary union representation) INFN Lazio1 of INFN sez Rome1, INFN sez Rome2, INFN sez Rome3
- 2008-2014 **Head of LABE Electronics Laboratory and service of INFN Sezione di Roma** (electronics design and support of experiments)
- 1999-2018 **CERN LHCb Experiment: Head of Electronics control system of Muon system** that consists of 5 *detector s*tations with a total area of 435 *m*2, 1380 *chambers* of 20 different types for a total of 122 000 channels.
- 2009-2013 **Head of Electronics of Calorimeter Detector** of the Italian ministry of research flag experiment SuperB.
- 2013-2014 ALLDgital: **INFN Roma coordinator** of Electronic Research Project on all digital PLL devices (**Patent Owner**)

Rome, Italy

1998 – 2003

RESEARCH TECHNOLOGIST – Istituto Nazionale Fisica Nucleare Sezione di Roma

- 2000 **Trigger group representative** in the Operation Board of Kloe (main experiment Laboratori Nazionali di Frascati) .
- 1999 CERN LHCb Experiment: **leading proponent** of Electronics control system of muon Detector.
- 1999-2005 **Member of the section council** of INFN Roma1 as a Research Technologist staff representative.
- 1999-2004 CERN Atlas Experiment: Proposal, qualification and design of Field Programmable Gate Array of Muon Trigger, **first use at CERN of FPGAs in LHC radiation environment** (first signature).

Roma, Italy

1993 – 1998

RESEARCH TECHNOLOGIST – Istituto Nazionale Fisica Nucleare (INFN) Sezione di Roma2

- KLOE (K Long Experiment in Frascati National Laboratory) at Daphne Accelerator in Frascati,5000 electronics Channel around 1000 *m*3 of the detector. Role: **One of the main people of the Architecture Design of the Trigger system**.
- Auger Cosmic-ray Observatory Argentina: 24 atmospheric Fluorescence Detector telescopes, and 1600 detectors in an area of 3000 *square kilometers*. Role: **leading proponent of the algorithm and hardware of fluorescence Detector trigger system**.

Rome, Italy

1992 – 1993

INFN DIGITAL EQUIPMENT FELLOW – Istituto Nazionale Fisica Nucleare (INFN) Sezione Roma2

- 1992-1993 Alsat Joint Project INFN - Digital Equipment: Realization of a single board computer based on the alpha 64-bit processor
Main role: **Main INFN designer**, Chip designer of 0.5 *um* technology, **first PCI chip in Italy**. The design ended in 1994 .**The Single Board computer was the fastest in the world in 1995** .

Rome, Italy

1990 – 1993

SCIENTIFIC ASSOCIATE – CERN

- Scientific Associate Member of DELPHI collaboration at LEP accelerator main role: design and performance of the new DELPHI Trigger System modules.
- 1990-1991 Graduate Student,
- 1991-1993 Scientific Associate

Geneva, Switzerland

● EDUCATION AND TRAINING

1991 – Rome, Italy

LAUREA DEGREE IN PHYSICS – University of Rome Tor Vergata

● PUBLICATIONS

Publications

- Research gate score 53.44 higher than 97.5% of all ResearchGate members. h-index 81.
- Over 1000 publications on scientific journals (with Referee)
- Over 30 presentation at international conferences
- Patent (owner 12.5 %) WO2016071813 - Digitally Controlled Oscillator Architecture (DCO)
- Patent (owner 90%) 102015000040903 Intraoperative probe.
- Supervisor and Referee of several Physics theses: Bachelor's Degree, Master's Degree, PhD

● HONOURS AND AWARDS

Honours and awards

The ArduSiPM detector, a handy particle detector, was rated one of the **top ten Makers European projects** and exhibited at the headquarters of the European Parliament in Brussels.

● JOB-RELATED SKILLS

Job-related skills

He has a remarkable knowledge of scientific instrumentation, especially in the field of sensors electronics and related physical phenomena.

● UNIVERSITY TEACHING

University teaching

- Contract Professor Sapienza University of Rome, Rome (Italy) Master degree in Physics course "Solid state sensors"
- Contract Professor Sapienza University of Rome, Rome (Italy) Physics PhD Course: "Electronics System for Physics experiment"
- Support Professor Sapienza University of Rome, Roma (Italy) Bachelor's Degree in Physics course "Signals and Systems Laboratory"
- 2003–2008 Contract Professor University of Rome Tor Vergata, Rome (Italy) Science Faculty Course "Physics Electronics"