

NUNZIO RANDAZZO - Curriculum Vitae

EDUCATION

- July 1993, University of Catania ; Degree in Physics, final grade 110/110 cum laude
- Nov. 1993 - Ott. 1996, University of Catania: pHD in Physics: 1 Nov. 1993 - 31 Oct. 1996
Thesis: Integrated pre-amplifiers for particle detectors.

POST DOC

- Nov. 1996 - Dec. 1997, CERN.
- Jan.1998 - Jun. 1999, C.S.F.N.S.M.
- July 1999 - Jan. 2001 - University of Catania

JOBS:

- Feb. 2001 - Dec. 2005 - Staff researcher @ INFN
- Jan 2006 - Feb. 2019 - Senior researcher @INFN
- From March 2019 Technologist Director @INFN

PROFESSIONAL CAREER AND MEMBERSHIPS

- May 2001 - May 2007 - Member of the Scientific Coordination Committee of INFN
- May 2008 - July - Member of the Scientific Coordination Committee of INFN
- Oct. 2002 - Oct. 2004 - member of the INFN National Committee for Technology Transfer and External Training (CNTTTFE)
- May 2004 - Jan. 2012 - Member of the INFN "Evaluation Work Group"
- Jan. 2002 - Dec. 2003 - Responsible of the "Mare del sud" (underwater acoustics) Experiment
- Jan. 2003 - Dec. 2006 - Member of Technical Board and in charge of acoustic positioning system - NEMO experiment
- Mar. 2003 - Mar. 2007 - Responsible for developing the front-end integrated electronics of the "New monolithic telescopic detector for nuclear particle and its applications" project, funded by Italian Minister of University and Research (MIUR) in accordance with law 297/99.
- Jan 2005 - Dec 2006 - Co-responsible for the "MOPI" (medical imaging) experiment
- Jan 2007 - Dec 2009 - Co-responsible for the "PRIMA" (PRoton IMAGING) experiment
- Jan. 2010 - Dec 2011 - Co-responsible for the "PRIMA+" (PRoton IMAGING) experiment
- Jan 2009 - Dec. 2011 - Responsible for the "TO_ASIC" experiment (VLSI development of ultra sub-micrometric technologies)
- Jan. 2012 - Dec 2015 - Co-responsible for the "RDH" (Research and Development on Hadrontherapy) experiment
- January 2012 - Dec 2014 - Co-responsible for the "DIAPIX (DIAMOND PIXEL) experiment
- Jan 2013 - to date - Co-responsible for IRPT experiments (Innovation in Radio- and Particle-Therapy) funded by Italian Minister of University and Research (MIUR)
- July 2015 - to date - Co-responsible for KM3net (Neutrino astronomy) experiment and member of Institution Board
- Jan 2016 to March 2019 - Manager of Italian Site of km3neT/IDMAR
- April 2019 - to date - Project Manager junction box IDMAR project

ACCADEMIA AND STUDENTS SUPERVISED

- A.A. 2010/11 - Contract with University of Catania - Course on General Electronics
 - A.A. 2011/12 - Contract with University of Catania - Course on General Electronics
 - A.A. 2013/14 - Contract with University of Catania - Course on Applied Electronics
- Supervisor and co-supervisor of twenty Master's Degree thesis and four pHD thesis.

RESEARCH ACTIVITY SUMMARY

- 1991-1993** - Master's Degree thesis work
Experiments: LEVE, PIZERO, MUFFINS
Activity : Analog signal processing for nuclear particles discrimination.
Infrastructure: LNS (Italy), GSI (Germany), BNL (USA)
- 1994-1998** - pHD thesis work and post doc.
Experiments: DSI, COSA, ALICE
Activity: Silicon Drift Detector development and VLSI front-end design.
Infrastructure: LNS (Italy), CERN (Geneva)
- 1999-2018**
Experiments: MARE DEL SUD, NEMO - ANTARES - KM3 - IDMAR
Activity: Neutrino Astronomy. Optical properties of deep water.
Development of pulsed underwater acoustic sources for positioning.
Integration and quality assurance of underwater electronics daq -ANTARES
Integration and quality assurance of the optical modules. NEMO - KM3
Marine operation with ROV assistance for underwater detector deployments.
Infrastructure: LNS (Italy), oceanographic vessell URANIA (CNR-Italy),
Oceanographic vessel THETIS (CNR-Italy),
Oceanographic vessel TELIRI (ELETTRA-Italy),
Oceanographic vessel NAUTICAL TIDE (FRUGO-USA)
Oceanographic vessel AMBROSIUS TIDE (FRUGO-USA)
- 2005-2015**
Experiments: MOPI - PRIMA - OFFSET - RDH
Activity: Proton computed tomography. Conceptual detector design
Front-end VLSI design. Scintillating crystals calorimetry. Trigger and DAQ
Infrastructure: LNS(Italy), Loma Linda University Medical Center (USA), TSL Uppsala (Sweden),
- 2011-2013**
Experiment : FIRST
Activity: Electronics read-out for time projection chamber.camera a proiezione temporale.
Infrastructure: LNS(Italy), GSI (Germany)
- 2009 - 2012**
Experiments: TO_ASIC
Activity: Design of front end electronics for particles detectors with very ultra deep submicron technology (65-90 nm).
- 2012-2013**
Experiment : DIAPIX
Activity: Timing performance of diamond detectors. Radiation hardness studies.
Infrastructure: LNS (Italy), FERMILAB (USA), CERN (Geneva)
- 2011-2015**
Experiment: MUON PORTAL
Activity: Larghe container scanning device for nuclear materials detection with muon.
Optical fiber tracker with SiPM read-out, DAQ.

2013- to date

Experiment: JLAB12/HPS/BDX (CSN3)
Activity: Dark light matter research with high intensity electron on fix target and beam dumped.
Calorimetry with scintillating crystals. Mechanical design. Calibration system. DAQ.
Infrastructure: LNS (Italy), JLAB (USA)

2018- to date

Experiments: KM3NET 2.0 - INFRADEV
Activity: Neutrino Astronomy.
Environmental impact of a cube kilo-meter underwater neutrino telescope
Infrastructure: LNS (Italy),

2017- to date

Experiments: IDMAR
Activity: Underwater research infrastructure
Development of junction boxes of underwater power and data network
Marine operation for infrastructure deployment.
Infrastructure: LNS (Italy),

