

Paolo SPAGNOLO

CV - breve

INSPIRE-00128022; ResearcherID G-3401-2017

POSIZIONE ATTUALE	Dirigente di Ricerca Istituto Nazionale di Fisica Nucleare
POSIZIONI PRECEDENTI	Scientific Associate e Fellow CERN , Marie Curie UE a Imperial College
TITOLO DI STUDIO	Ph.D e Laurea cum laude in Fisica (Università degli Studi di Pisa)
ABILITAZIONI	Abilitazione Scientifica Nazionale come Prima Fascia settore Interazioni Fondamentali (02/A1)
ESPERIMENTI	ALEPH e CMS al CERN, STAX e SIMP
LEADERSHIP	PI di STAX, Coordinatore di CSN1 a Pisa, convener gruppi CMS coordinati negli anni centinaia di ricercatori e gestito più di 2M€
INNOVAZIONE	Proposto nuovo metodo per rivelazione degli Assioni e ALPS con nanotecnologie e criogenia spinta
CONFERENZE	Più di 30 conferenze/seminari internazionali di cui 2 talk di apertura plenaria (LHCP e ICPP)
PUBBLICAZIONI	Più di 1200 pubblicazioni, h-Index 169
ORGANIZZAZIONECONFERENZE	Comitato organizzatore o scientifico di diverse conferenze internazionali
RUOLI EDITORIALI	Editore per alcune riviste e per un libro in uscita World Scientific su LHC. Reviewer per numerose riviste di Fisica delle Particelle
REVISIONE PROGETTI	Revisore MIUR, ANVUR, Referee per CSN1 e GE, Revisore Internazionale
FONDI ESTERNI	ATTRACT e RT per finanziamenti superiori a 500k€
PREMI	Premio SIF, Società Italiana di Fisica
TRASFERIMENTO TECNOLOGICO	Planet Watch: Fondatore del primo spin-off CERN su blockchain https://www.planetwatch.io
DISSEMINAZIONE	Docenza di Dark Matter presso UNIPI, numerosi seminari divulgativi e visite scientifiche al CERN per studenti

Livia Conti è ricercatrice dell'Istituto Nazionale di Fisica Nucleare dal 2008 e prima ricercatrice dal 2020. Dal 2013 al 2017 è stata anche tutor di Fisica Sperimentale per la Scuola Galileiana di Studi Superiori dell'Università di Padova. Ha conseguito la laurea in Fisica presso l'Università di Padova nel 1996 e il dottorato in Fisica presso l'Università di Trento nel 2000. Si occupa di ricerca sperimentale per la rivelazione delle onde gravitazionali. Ha partecipato prima al rivelatore di onde gravitazionali AURIGA, per il quale ha sviluppato un readout interferometrico del segnale. Nel 2001 è stata tra i principali proponenti di un nuovo tipo di rivelatore di onde gravitazionali, il rivelatore DUAL, al cui R&D ha lavorato dal 2006 al 2010. Nel 2002 ha ricevuto il premio SIGRAV dalla Società Italiana di Relatività Generale e Gravitazione. Nel 2007 ha ricevuto uno Starting Independent Researcher Grant dell'European Research Council e ha condotto l'esperimento RareNoise dal 2008 al 2015 volto allo studio del rumore termico fuori dall'equilibrio termodinamico in corpi solidi elastici. Dal 2014 fa parte della collaborazione Virgo che rivela segnali gravitazionali di origine astrofisica con interferometria laser. Per la collaborazione Virgo è stata Outreach Coordinator dal 2018 al 2022. Dal 2021 fa parte anche della collaborazione internazionale per il rivelatore Einstein Telescope e in particolare co-coordina il gruppo di lavoro sulla luce diffusa. E' autrice di circa 200 lavori su riviste scientifiche internazionali, con un H-index superiore a 60. Opera regolarmente come referee per alcune riviste scientifiche internazionali, oltre a essere chiamata come esperta in referaggi di progetti internazionali.

Curriculum Vitae

Danilo Rifuggiato

Senior Technological Scientist (Dirigente Tecnologo 1st professional level)
Istituto Nazionale di Fisica Nucleare (INFN)
Laboratori Nazionali del Sud (LNS), via S. Sofia 62, 95123 Catania, Italy

Studies and fellowship

- 1986 **Master Degree in Physics.** University of Catania 110/110 cum laude
- 1988 **Specialization in Health Physics.** University of Pisa 60/60 cum laude
- 1987-1989 **Research fellowship of the CNR** Istituto di Fisiologia Clinica, Pisa for studies
in the field of Nuclear Imaging, in particular Positron Emission Tomography
- 1989-1991 **INFN fellowship** on Accelerator Physics on Beam dynamics in the
Superconducting Cyclotron and diagnostic systems at INFN LNS Catania
- 1991 **Fellowship of Centro Siciliano di Fisica Nucleare e Struttura della Materia**
on Development of Ion Accelerators for Research in Nuclear Physics

Career

- 15-06-1991 Permanent position: **Research Scientist** (Ricercatore) - 3rd professional
level - INFN LNS
- 16-12-2005 Permanent position: **Research Scientist** (Primo Ricercatore) - 2nd
professional level - INFN LNS
- 31-12-2010 Permanent position: **Technological Scientist** (Primo Tecnologo) - 2nd
professional level - INFN LNS
- 01-08-2015 Permanent position: **Senior Technological Scientist** (Dirigente Tecnologo)
- 1st professional level - INFN LNS

Responsibility positions

1999-2001	Coordinator of the LNS Superconducting Cyclotron
2001-2015	Head of the LNS Accelerator Division
2016-2019	Reference person for the LNS operation and organization (collaborator of the LNS Director)
2016-2019	Scientific secretary of the LNS Program Advisory Committee
2018-2019	Scientific coordinator of the project POTLNS for the upgrade of the Laboratori Nazionali del Sud
2020-present	Project leader of the SPES project at the Laboratori Nazionali di Legnaro

Committees

2006-2009	Member of the STI Committee (Scientific and Technical Issues) for the project FAIR
2007-2011	Task Coordinator of the project Spiral2PP (Spiral2 Preparatory Phase) (212692 FP7): Slow Chopper (Task WP6.2) and Single bunch selector (Task WP6.5)
2007	Chairman of the Local Organizing Committee of the XVIII International Conference on Cyclotrons and their Applications, Giardini Naxos, Italy, 2007
2007-2021	Member of the Scientific Advisory Committee of the International Conference on Heavy Ion Accelerator Technology (HIAT)
2010-2012	Member of the International Referee Committee of the SPES project at INFN LNL
2012-2016	Member of the INFN Machine Advisory Committee (MAC)
2013-2020	Member of the TAC (Technical Advisory Committee) of the SPES project
2016-2019	Member of the LNS Public Engagement Committee
2016-present	Member of the International Organizing Committee of the International Conference on Cyclotrons and their Applications

- 2021-2022 **Chairman of the Sezione VI Fisica applicata, beni culturali e acceleratori**
108° Congresso Nazionale SOCIETA' ITALIANA di FISICA, Milan September
12-16 2022
- 2018-2019 **Member of the INFN Committee for 26 positions of Researcher Scientists**
(2nd professional level) in Experimental Physics in the INFN Institutes and
Laboratories
- 2022 **Member of the INFN Committee for 4 positions of Researcher Scientists**
(3rd professional level) in Particle Acceleration Techniques in the INFN
Institutes and Laboratories

Also member of local Committees for selection of several personnel units.

Activity as a Referee

- 2007 **Editor of the Proceedings** of the XVIII International Conference on
Cyclotrons and their Applications, Giardini Naxos, Italy, 2007
- 2012-2016 **Referee of the LUNA MV project at INFN LNGS**
- 2013-2016 **Referee of the call MAGIX in the 5th INFN Scientific National Committee**
- 2018 **Referee for the FELLINI (FELLOwship for INnovation at INFN) project**

Also referee for the NIM A Journal and reviewer for Il Nuovo Saggiatore of 3 books on
Particle Accelerators

Publications

Around 100 publications on journals and proceedings of conferences

Presentations

Around 50 oral (invited and contributed) presentations in conferences and meetings

Main Research Activity

- Beam dynamics in the LNS Superconducting Cyclotron (SC)
- Radial injection of a Tandem beam in the SC, Acceleration, Resonances, Extraction in the
SC
- Magnetic measurements in the SC, 1° harmonic compensation

- Calculation of the operating parameters for the SC, commissioning of the SC
- Beam development in the SC
- Phase selection in the SC
- Axial injection in the SC : Central region and inflector in the SC
- Matching of the Axial beam line with the SC
- Beam timing
- Technological upgrade of the electrostatic deflectors of the SC
- High intensity Cyclotrons
- Extraction by stripping in the SC
- Design of the mass separator for the ISOL facility EXCYT
- Commissioning of the ISOL facility EXCYT
- Beam delivery for the LNS CATANA protontherapy facility
- Collaboration in the ELIMED project for production of laser driven beams for medical applications

Activity as the Head of the LNS Accelerator Division (2001-2015)

Coordination of the operation and development of the LNS accelerators, Tandem, Superconducting Cyclotron, ion sources and beam lines. Coordination of the groups operating in several technological areas involved in such activities, like Cryogenics, Vacuum, Power Converters, Electronics, Radiofrequency, Mechanics, Plants, Controls, Diagnostics.

Planning of the experimental activities with the LNS beams and coordination of the beam operations up to the experimental set-up.

Coordination of the Revamping of the Helium liquefier constructed by Air Liquide. Coordination of the Tandem upgrade, consisting of the replacement of the belt with the Pelletron as a charging system.

Coordination of the expenses plan for the LNS accelerators.

Activity as Collaborator of the LNS Director – Reference person for the LNS operation and organization (2016-2019)

- Production of documents requested by INFN Headquarters: LNS Activity Plan, LNS Final Activity Report
- Scientific secretary of the LNS Program Advisory Committee
- Interaction with LNS Divisions and Services for operation and organization

- Production of documents for LNS personnel hiring
- Production of documents for VQR (Evaluation of Research Quality)
- Production of documents for the INFN CVI (International Evaluation Committee)
- Production of documents for the NUPECC Long Range Plan
- Supervision of the Public Engagement committee for the organization of public events (European Research Night, Week of Scientific and Technological Culture, visits and seminars schools and public, etc.)
- Supervision of the LNS Web Site
- Interaction with the LNS Administrative Service for complex procedures

Activity as a Scientific Coordinator of the POTLNS project (2018-19)

As a **Scientific Coordinator** (appointed by the INFN President), on June 12th, 2018 I submitted the POTLNS project to the MIUR (Ministry for Education, University and Research) to access the European funds of the Call for Proposals for the awarding of grants aimed to enhance research infrastructures, pursuant to Action II.1 of the **National Operative Programme – Research and Innovation 2014-2020**.

The total cost is 19,3 M€, the project duration is three years. The project was approved on March 14th, 2019.

Activity as a Project Leader of the SPES project (2020-present)

Coordination of the SPES project at INFN Laboratori Nazionali di Legnaro, in particular of the installation activities towards the authorization to operate. Coordination of the commissioning phase, consisting in the production of Radioactive Ion Beams (RIBs) with the ISOL technique, to be post-accelerated with the ALPI accelerator. Coordination of the activities carried out by the Work Package groups and management of the expenses.

Catania, December 22nd 2022

Danilo Rifuggiato