

## **Giandomenico Amendola - CV**

He holds a degree in Electrical Engineering from University of Calabria-Italy. From 1988 to 1993, he was with the European Centre for Nuclear Research (CERN) in Geneva (CH) designing linear particle accelerators. Since 1994 he is with the University of Calabria where is currently Associate Professor of Electromagnetic Fields. He held courses on Electromagnetic fields, Microwave Engineering, Electromagnetic Compatibility and Radio Communication Systems. During the years his research activities concentrated on analytical and numerical methods for electromagnetics (MoM, characteristic modes, special functions) and antenna analysis and design. Currently his activities are focusing on integrated phased array antenna front ends design, Silicon Germanium MMICs and SatCom antennas. He was responsible of several projects funded by European and Italian Institutions and Companies and published more than 150 papers on journals and conference proceedings. He was associate editor of the IEEE Wireless and Propagation Letters and he is currently Associate Editor of the IEEE Transactions on Antennas and Propagation. He is member of the recently constituted IEEE MTT Technical Committee TSC-29 Microwave Aerospace Systems.

### **Funded Projects**

- 2019 -2021 Responsible of the “Obiettivo Relizzativo 2” (Electron Beam Accelerator and Support Laboratory) of the project “Sorgente Thomson Backscattering per la ricerca applicata nel sud Europa” -“Avviso per la concessione di finanziamenti finalizzati al potenziamento di infrastrutture di ricerca, in attuazione dell’Azione II.1 del PON Ricerca e Innovazione 2014-2020”, currently in realization at the University of Calabria.
- 2019-2021 Responsible of the research unit of the Universita’ della Calabria in the Project “OT4CLIMA - Tecnologie OT innovative per lo studio degli impatti del Cambiamento climatico sull’ambiente”- Programma Operativo Nazionale “Ricerca e Innovazione” 2014-2020, “Avviso per la presentazione di progetti di Ricerca Industriale e Sviluppo Sperimentale nelle 12 aree di specializzazione individuate dal PNR 2015 - 2020”- Area Aerospazio.
- 2018-2019 Responsible for the Universita’ della Calabria of the Project SAVE -POR CALABRIA FESR 2014/2020.
- 2016-2020 Responsible of the research units of CNIT (Consorzio Nazionale Interuniversitario per le Telecomunicazioni) in the project funded by the European Community (Horizon2020 program): “QV-LIFT-Q/V band earth segment Link for Future high Throughput space systems” (In collaboration with: Italian Space Agency (ASI) (I), Eutelsat (F), Ommic(F), Heriot-Watt University (UK), ERZIA (I), MBI(I), Martel (CH), Skytech (I))
- 2015-2016 Responsible of the research unit of the Universita’ della Calabria in the project funded by the European Space Agency: “SKATE-Low Cost BFN/RF front end using multimode on chip for Ka band user terminal” (In collaboration with Space Engineering (I))

- 2015-2016 Responsible of the research unit of the Università' della Calabria in the project funded by Selex Es (I): "SIGMA-Design of antennas for Ka band Satcom Terminal
- 2014-2017 Work Package Leader in the Project funded by the European Community (FP7 program): "DIFFERENT-Digital beam forming for multi-static space-borne synthetic aperture radars" (in collaboration with: German Space Agency (DLR) (D), Silicon Radar (D), IHP (D), Innovative Solution In Space - ISIS (NL), Evatronix (PL))
- 2011-2014 Responsible of the research unit of the Università' della Calabria in the project funded by the European Community (FP7 program): "FLEXWIN-Flexible Microsystem Technology for Micro and Millimeter Wave Antenna Arrays with Intelligent Pixels" (In partnership with: EADS (now Airbus) (D), University of Ulm (D), University of Surrey (UK), IHP(D))
- 2006 Scientific Coordinator of the project funded by the Italian Institution Regione Calabria - Survey of the sources of Electromagnetic pollution in Calabria. (in collaboration with SISEM (I))
- 2008 Responsible of the research unit of the Università' della Calabria in the project funded by the Italian Ministry of Research (PRIN program) – Substrate Integrated Waveguides for millimetre waves (In collaboration with the University of Pavia (I) and with the University of Perugia (I))
- 2004-2009 Responsible of the research unit of the Università' della Calabria in the project funded by the Italian Ministry of Research (297 program): "APRI-Ka: TX/RX flat antenna at Ka Band" (in collaboration with Space Engineering (I))
- 2002 – Responsible of the project funded by the Italian Ministry of Research (PON program): Establishment of a Laboratory for microwave and millimeter wave measurements.

## **Publications**

<https://www.scopus.com/authid/detail.uri?authorId=7005604459>

Cosenza 07/10/2021

A handwritten signature in blue ink, appearing to read 'G. Amolli', written in a cursive style.

## CURRICULUM

La sottoscritta Lucia Boscagli,  
dichiara:

- di aver lavorato presso l' INFN LNL dal 01/07/1992 al 31/07/1992, dal 01/09/1992 al 29/11/1992, dal 15/09/1993 al 14/12/1993, dal 01/07/1994 al 02/11/1997 con contratto a tempo determinato e dal 03/11/1997 con contratto a tempo indeterminato.

- di aver partecipato dal 1992 al 1994 ai lavori di brasatura e piombatura delle cavità risonanti superconduttive del Linac e al montaggio delle stesse nei criostati curando soprattutto le problematiche connesse con il sistema a radiofrequenza.

- di aver lavorato come tecnico turnista presso il complesso Tandem-Alpi dal 1994 al 2004 occupandomi della preparazione e del trasporto dei fasci, delle manutenzioni ordinarie e straordinarie degli acceleratori, del condizionamento e funzionamento delle cavità superconduttive e dell'elettronica di macchina.

- di aver lavorato dal 2004 al 2011 nel reparto Diagnostica curando le manutenzioni ordinarie e straordinarie degli apparati e lo sviluppo di nuovi sistemi di monitoraggio dei fasci.

- di essere stata responsabile del reparto di Radiofrequenza dal 17/02/2006 al 31/12/2011.

- di essermi occupata dal 2004 al 2012, su incarico del Direttore dei LNL, delle problematiche relative alla costruzione ed avviamento di un asilo nido aziendale in collaborazione con altri Enti della zona.

- di lavorare dal 2012 come tecnico turnista presso il complesso Tandem-Piave-Alpi occupandomi della preparazione e del trasporto dei fasci, delle manutenzioni ordinarie e straordinarie degli acceleratori, del condizionamento e funzionamento delle cavità superconduttive e dell'elettronica di macchina. Collaboro alla costruzione del Laddertron.

**Titolo di studio:** Diploma di Perito Industriale Capotecnico spec. Elettronica.

Legnaro, 04 Ottobre 2021



## CV Andrea Pisent

First name	Andrea
Surname	Pisent
Beneficiary	INFN
Current job title	
e-mail	Andrea.pisent@lnl.infn.it

### Highest education level (BSc, MSc, PhD):

High school, Liceo classico 1981 (60/60)

University: Degree in Physics at Padova University in 1986 with thesis in theoretical Accelerator Physics (110/110 cum laude).

Post doc at Karlsruhe University and at Los Alamos (University of California); CERN fellow.

### Relevant work experience in the related Work Package area:

Since 1990 at INFN Legnaro National Laboratory, since 2008 as Dirigente Tecnologo, leads the Beam Physics group.

Responsible for:

- beam dynamics and commissioning of CERN Linac3 low energy part (built by INFN LNL).
- Beam dynamics and commissioning of PIAVE superconducting RFQ at LNL.
- Construction of TRASCO RFQ (high intensity proton) and MUNES neutron source study at INFN LNL.
- Construction ESS drift tube linac (Italian in kind contribution)
- Construction of IFMIF EVEDA RFQ (high intensity deuterons) as Italian in kind contribution
- Professor of Accelerator Physics as Professore a contratto) at Padova University (undergraduate and PHD) for many years.
  - Coordinates INFN in-kind contribution to ESS ERIC.
- Member of the scientific board of the PHD in Accelerator Physics at the University La Sapienza in Rome, member of the CTS of RFX Consortium in Padova.

### Any other relevant information:

Coordinator of the WU RFQ for WPENS

<https://scholar.google.com/citations?user=F68uxfsAAAAJ&hl=it&oi=ao>

### Major relevant publications (last 5 years):

1. Knaster, Juan et al. " The accomplishment of the engineering design activities of IFMIF/EVEDA: the European–Japanese project towards a Li (d, xn) fusion relevant neutron source" Nuclear Fusion, (55.0) 8.0 p. 86003 (2015), IOP Publishing
2. Comunian, Michele et al. " RIB Transport and Selection for the SPES Project" 6th Int. Particle Accelerator Conf.(IPAC'15), Richmond, VA, USA, May 3-8, 2015, (nan) nan p. 3782-3784 (2015), JACOW, Geneva, Switzerland
3. Ferrari, Luigi et al. " Thermo-Mechanical Calculations for the SPES RFQ" 13th Heavy Ion Accelerator Technology Conference (HIAT2015), Yokohama, Japan, 7-11 September 2015, (nan) nan p. 219-221 (2016), JACOW, Geneva, Switzerland
4. Comunian, Michele et al. " The project SPES at Legnaro National laboratories" 13th Heavy Ion Accelerator Technology Conference (HIAT2015), Yokohama, Japan, 7-11 September 2015, (nan) nan p. 156-159 (2016), JACOW, Geneva, Switzerland



5. Mereu, Paolo et al. " ESS DTL Mechanical Design and Prototyping." Proc. IPAC'16, (nan) nan p. 2131-2133 (2016), nan
6. Mereu, Paolo et al. " Mechanical integration of the IFMIF-EVEDA radio frequency quadrupole" 7th Int. Particle Accelerator Conf.(IPAC'16), Busan, Korea, May 8-13, 2016, (nan) nan p. 3712-3714 (2016), JACOW, Geneva, Switzerland
7. Comunian, Michele et al. " IFMIF-EVEDA RFQ, Measurement of Beam Input Conditions and Preparation to Beam Commissioning" Proc. HB, (nan) nan p. 338 (2016), nan
8. Fagotti, Enrico et al. " Status of IFMIF-EVEDA RFQ" Proc. RuPAC, (nan) nan p. 51 (2016), nan
9. Pisent, Andrea et al. " Towards commissioning of the IFMIF RFQ" LINAC 2016 (East Lansing, USA,),(nan) nan p. nan (2016), nan
10. Fagotti, Enrico et al. " Preparation and installation of IFMIF-EVEDA RFQ at Rokkasho site" 28th Linear Accelerator Conf.(LINAC'16), East Lansing, MI, USA, 25-30 September 2016, (nan) nan p. 1005-1007 (2017), JACOW, Geneva, Switzerland
11. Palmieri, Antonio et al. " Tuning the IFMIF 5MeV RFQ accelerator" Proc. LINAC'16, (nan) nan p. 969 (2016), nan
12. Bellan, Luca et al. " Source and LEBT beam preparation for IFMIF-EVEDA RFQ" 28th Linear Accelerator Conf.(LINAC'16), East Lansing, MI, USA, 25-30 September 2016, (nan) nan p. 420-423 (2017), JACOW, Geneva, Switzerland
13. Comunian, Michele et al. " ESS DTL Beam Dynamics Comparison Between S-Code and T-Code" 28th Linear Accelerator Conf.(LINAC'16), East Lansing, MI, USA, 25-30 September 2016, (nan) nan p. 411-413 (2017), JACOW, Geneva, Switzerland
14. Comunian, Michele et al. " Commissioning Plans for the ESS DTL" 28th Linear Accelerator Conf.(LINAC'16), East Lansing, MI, USA, 25-30 September 2016, (nan) nan p. 264-266 (2017), JACOW, Geneva, Switzerland
15. Ferrari, Luigi et al. " RF-Mechanical Design and Prototyping of the SPES RFQ" 8th Int. Particle Accelerator Conf.(IPAC'17), Copenhagen, Denmark, 14â 19 May, 2017, (nan) nan p. 4166-4168 (2017), JACOW, Geneva, Switzerland
16. Mauro, Giorgio et al. " Field uniformity preservation strategies for the ESS DTL: approach and simulations" 8th Int. Particle Accelerator Conf.(IPAC'17), Copenhagen, Denmark, 14â 19 May, 2017, (nan) nan p. 4139-4141 (2017), JACOW, Geneva, Switzerland
17. Mereu, Paolo et al. " Thermo mechanical study of the ESS DTL" 8th Int. Particle Accelerator Conf.(IPAC'17), Copenhagen, Denmark, 14â 19 May, 2017, (nan) nan p. 4537-4539 (2017), JACOW, Geneva, Switzerland
18. Fagotti, Enrico et al. " Installation and Low Power Test of IFMIF-EVEDA RFQ at Rokkasho Site" 8th Int. Particle Accelerator Conf.(IPAC'17), Copenhagen, Denmark, 14â 19 May, 2017, (nan) nan p. 4162-4165 (2017), JACOW, Geneva, Switzerland
19. Bolzon, Benoit et al. " Intermediate Commissioning Results of the 70 mA/50 keV H<sup>+</sup> and 140 mA/100 keV D<sup>+</sup> ECR Injector of IFMIF/LIPAC" 7th Int. Particle Accelerator Conf.(IPAC'16), Busan, Korea, May 8-13, 2016, (nan) nan p. 2625-2627 (2016), JACOW, Geneva, Switzerland
20. Chel, S et al. " The linear IFMIF prototype accelerator (LIPAC) design development under the European-Japanese collaboration" nan, (nan) nan p. nan (2016), nan
21. Bolzon, Benoit et al. " Intermediate commissioning results of the required 140 mA/100 keV CW D<sup>+</sup> ECR injector of LIPAc, IFMIF's prototype" Proceedings of ECRIS2016 (WECO01), Busan, South Korea, (nan) nan p. nan (2016), nan
22. Shinya, Takahiro et al. " Status of the RFQ linac installation and conditioning of the Linear IFMIF Prototype Accelerator" Nuclear Materials and Energy, (15.0) nan p. 143-147 (2018), Elsevier
23. Comunian, Michele et al. " Beam dynamics simulation and measurements for the IFMIF/EVEDA project" 61<sup>st</sup> ICFA ABDW on High-Intensity and High-Brightness Hadron Beams (HB'18), Daejeon, Korea, 17-22 June 2018, (nan) nan p. 210-214 (2018), JACOW Publishing, Geneva, Switzerland



24. Fagotti, Enrico et al. " Beam commissioning of the IFMIF EVEDA very high power RFQ" 9th Int. Particle Accelerator Conf.(IPAC'18), Vancouver, BC, Canada, April 29-May 4, 2018, (nan) nan p. 2902-2907 (2018), JACOW Publishing, Geneva, Switzerland
25. Bellan, Luca et al. " Beam Dynamics of the First Beams for IFMIF-EVEDA RFQ Commissioning" 9th Int. Particle Accelerator Conf.(IPAC'18), Vancouver, BC, Canada, April 29-May 4, 2018, (nan) nan p. 3246-3248 (2018), JACOW Publishing, Geneva, Switzerland
26. Comunian, Michele et al. " Beam Dynamic Simulation for the Beam Line from Charge Breeder to ALPI for SPES Project" 9th Int. Particle Accelerator Conf.(IPAC'18), Vancouver, BC, Canada, April 29-May 4, 2018, (nan) nan p. 3255-3257 (2018), JACOW Publishing, Geneva, Switzerland
27. Bellan, L et al. " Self-Consistent potential in high intensity deuteron beams simulations and measurements" AIP Conference Proceedings, (2011.0) 1.0 p. 80013 (2018), AIP Publishing LLC
28. Sugimoto, M et al. " Overview of the Validation Activities of IFMIF/EVEDA: LIPAc, the Linear IFMIF Prototype Accelerator and Lifus 6, the Lithium Corrosion Induced Facility" Preprint, (nan) nan p. 2020-03-03 00:00:00 (2018), nan
29. Chauvin, N et al. " Deuteron Beam Commissioning of the Linear IFMIF Prototype Accelerator Source and LEBT" Proc. 27th IAEA Fusion Energy Conf., Gandhinagar, India, (nan) nan p. nan (2018), nan
30. Sargsyan, Edgar et al. " ESS Normal Conducting Linac Status and Plans" 29th Linear Accelerator Conf.(LINAC2018), Beijing, China, (nan) nan p. nan (2018), nan
31. Mereu, Paolo et al. " Details of the Manufacturing Processes of the ESS-DTL Components" 29<sup>th</sup> Linear Accelerator Conf.(LINAC'18), Beijing, China, 16-21 September 2018, (nan) nan p. 260-263 (2019), JACOW Publishing, Geneva, Switzerland
32. Mereu, Paolo et al. " Design Details of the European Spallation Source Drift Tube LINAC" 29<sup>th</sup> Linear Accelerator Conf.(LINAC'18), Beijing, China, 16-21 September 2018, (nan) nan p. 190-192 (2019), JACOW Publishing, Geneva, Switzerland
33. Sugimoto, Masayoshi et al. " Progress report on LIPAc" presented from this work may be used under the terms, (nan) nan p. nan (2019), nan
34. Fagotti, Enrico et al. " IFMIF/EVEDA RFQ preliminary beam characterization" Proc. LINAC'18, (nan) nan p. 834-837 (2019), nan
35. Dima, Razvan et al. " IFMIF RFQ module characterization via mechanical and RF Measurements" nan, (nan) nan p. nan (2017), nan
36. Wittmer, Walter et al. " European Spallation Source (ESS) Normal Conducting Front End Status Report" 28th Linear Accelerator Conf.(LINAC'16), East Lansing, MI, USA, 25-30 September 2016, (nan) nan p. 274-276 (2017), JACOW, Geneva, Switzerland
37. Mauro, Giorgio S et al. " Analytical Method, based on Slater Perturbation Theorem, to Control Frequency Error when representing Cylindrical Structures in 3D Simulators" 2019 13th European Conference on Antennas and Propagation (EuCAP), (nan) nan p. 2020-04-01 00:00:00 (2019), IEEE
38. Shimosaki, Yoshito et al. " Lattice Design for 5MeV-125mA CW RFQ Operation in the LIPAc" nan, (nan) nan p. nan (2019), nan
39. Grespan, Francesco et al. " Tuning Experience on the ESS DTL Cold Model" 29<sup>th</sup> Linear Accelerator Conf.(LINAC'18), Beijing, China, 16-21 September 2018, (nan) nan p. 784-786 (2019), JACOW Publishing, Geneva, Switzerland
40. Baltador, Carlo et al. " High resolution mass separator dipole design studies for SPES project" Journal of Physics: Conference Series, (1401.0) 1.0 p. 12014 (2020), IOP Publishing
41. Comunian, Michele et al. " Status of the SPES Exotic Beam Facility" Journal of Physics: Conference Series, (1401.0) 1.0 p. 12002 (2020), IOP Publishing
42. Cavenago, M et al. " Development and installation of a radio frequency quadrupole cooler test" Review of Scientific Instruments, (90.0) 11.0 p. 113324 (2019), AIP Publishing LLC
43. Kondo, Keitaro et al. " Validation of the linear IFMIF prototype accelerator (LIPAc) in Rokkasho" Fusion Engineering and Design, (153.0) nan p. 111503 (2020), North-Holland



44. Shinya, Takahiro et al. " Integration of 175-MHz LIPAc RF System and RFQ Linac for Beam Commissioning" IEEE Transactions on Plasma Science, (nan) nan p. nan (2020), IEEE