PERSONAL INFORMATION

Francesco Prudenzano

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EMPLOYMENT

Full Professor in Electromagnetic Field (09/F1) – Polytechnic University of Bari

WORK EXPERIENCE

Teacher of university courses; responsibility of scientific activities, national and international research projects funded based on competitive call, coordination within European actions; responsibility of research laboratories and research groups; responsible of scientific cooperations with enterprises in the field of applied electromagnetism, microwave, antennas and optics, contributions in Program Committee, Chairing and Conference Organization; technology transfer and link with territory. Guest Editor of Special Issue e Member of editorial board of International journals; reviewer of national and international research projects. Chair of National Scientific Society. Member of the Administration Council and of the Strategic Board of the Technical University Politecnico di Bari. Representative Member of the Technical University Politecnico di Bari within the consortium CNIT - National Inter-University Consortium for Telecommunications.

GENERAL RESEARCH INTERESTS

TOPICS: applied electromagnetism, microwave, antennas and optics. The research activity regards the design and characterization of microwave devices as couplers, resonator, filters and antennas for communication and sensing applications; in particular in Substrate Integrated Waveguide (SIW) technology. Electromagnetic design of resonant cavities used in linear particles accelerators (LINAC). Other interest regard the integrated, linear and non-linear planar devices; photonic band gap based components; design and fabrication of optical fiber lasers and amplifiers in near (NIR) and medium (MID-IR)infrared wavelength range; rare earth doped microspheres and microdisks; applications for environmental monitoring, sensing and biomedicine. Since 2010 to nowadays Responsible of Electromagnetic Field and Telecommunications Laboratory at the Interdepartmental Magna Grecia Center, MOE - Microwave and Optical Engineering group, Politecnico di Bari. He obtained research funds and realized the Laboratory of Electromagnetic Fields and Telecommunication at Magna Grecia Interdepartmental Center – MOE equipped for i) the construction and characterization of microwave prototypes in SIW (substrate integrated waveguide) technology via an UV laser writing station, multilayer press, metallization station, anechoic chamber, network analyzers; ii) monitoring of electromagnetic field level and electromagnetic compatibility EMC measurements, via electromagnetic field level meters, electromagnetic conducted emissions EMI test station, RF signal sources, oscilloscopes, vectorial spectrum analyzers VNAs, wide band antennas; iii) optical fiber processing units, splicing station, recoating station, high precision cutter, beam quality measurement set-up M2, high power lasers, optical spectrum analyzers OSAs, optical benches with several component set-ups.
MEMBER OF SCIENTIFIC PROGRAM COMMITTEE OF NATIONAL AND INTERNATIONAL CONFERENCES, the most recent ones: PRE'17Workshop; Fotonica 2017; SPIEPhotonics Europe 2018"Fiber Lasers and Glass Photonics: Materials through Applications"; Fotonica 2019; Photoluminescence in Rare Earths: Photonic Materials andDevices (PRE) –2019; PIERS 2019 Rome; PHOTOPTICS 2019 the 7th International Conference on Photonics, Optics and LaserTechnology"; PHOTOPTCS 2020, ICOP 2020 (Italian Conference on Optics andPhotonics); ICOP2022; Photoluminscence in Rare Earths: Photonic Materials and Devices (PRE 2021); PRE 2022; MMS 2022; SPIE Photonics Europe 2022. GENERAL CHAIR of workshops and conferences: Workshop "EMC Basics & Applications", Politecnico di Bari, 13 June 2014; Conferenceon Substrate Integrated Waveguides and Related Technology, CSIWT 2015, Bari, 15 May 2015; "LIGHTtalks: Careers in Photonics: LIGHT UPOUR LIFE" UNESCO / SIOF, AEIT–AICT- Bari, 23 ottobre 2015; the International Conference on Dielectric Photonic Devices and Systems BeyondVisible (D-Photon 2018), Bari, Italy, 1-2 October 2018, the XXII Conference ICTON 2020, International Conference on Transparent OpticalNetworks, 19-23 July 2020, Bari Italy. EDITORIAL ACTIVITY Lead Guest Editor of the Special Issue (SI) "Advances in Lasers and Optical Amplifiers: Materials, Components, and Systems" InternationalJournal of Optics, Hindawi Publishing Corporation, Volume 2012. Guest Editor of the SI "Advances in Optical Fibers" Fibers MDPI 2013; co-Editorof the book "Innovative Materials and Systems for Energy Harvesting Applications", IGI GLOBAL April, 2015; Guest Editor of SI Issues: "NonlinearFiber Optics"" Photonics MDPI, "Advances in Optical Fibers II" of Fibers MDPI 2017. Editor of the two Special Issues of Applied Science " Special " Substrate Integrated Waveguide (SIW) and its Applications" 2019 and " Substrate Integrated Waveguide (SIW) and its Applications II " 2022. Editorial Board member of Journal in the field of Optics and Photonics. More recently, since 2019 Member of the Editorial Board of the internationalJournal of Optics MDPI; the international Journal Sensors MDPI; the international Journal Applied Sciences MDPI; the international Journal Optical and Quantum Electronics journal, Springer; in 2020 Section Editor-in-Chief of MDPI Photonics "Lasers, Light Sources and Sensors"

BIBLIOMETRIC SUMMARY DATA

THE ERC/SSD DOMAIN are: PE7 Systems and Communication Engineering (Electrical, electronic, communication, optical and systems engineering)

PE7_3 Simulation engineering and modelling
PE7_5 (Micro- and nano-) electronic, optoelectronic and photonic components

PE7_6 Communication systems, wireless technology, high-frequency technology
PE7_11 Components and systems for applications (in e.g. medicine, biology, environment)

SSD - Area09 – Ingegneria Industriale e dell'Informazione (industrial and information engineering) - 09/F1 Campi Elettromagnetici (Electromagnetic Fields);

BIBLIOMETRIC DATA FROM SCOPUS 2023.02.09: documents 292, citations 2995, h-index 29.
BIBLIOMETRIC DATA FROM GOOGLE SCHOLAR 2022.12.28: documents 389, citations 3732 , h-index 32

Since 2022	Member of the Steering Committee of the interdepartmental "Magna Grecia" research center - confirmed by the Department of Electrical and Information Engineering of Politecnico di Bari for the 3-year period 2022/2024
2019	Visiting Professor at IETR (Institut d'Electronique et de Télécommunications de Rennes) UMR / CNRS 6164 Département Antennes & Dispositifs Hyperfréquences, Université de Rennes 1.
Since 2018	Vice chair of CoRiFI-Coordinamento Ricerca Innovazione Fotonica Italia dell'AEIT- 2018-2020 – The Italian Coordination of Innovation and Research on Photonic.
2017-2018	Chair for the two-year period 2017-2018 (national vote of 2014) of the Società Italiana di Ottica e Fotonica SIOF – EOS European Optical Society italian branch (http://www.siof-ottica.it/it)
2015-2021	Coordinator of the Teacher Council of the Electronic and Telecommunication Engineering of Politecnico di Bari - Elected with vote held at DEI of Politecnico di Bari.
Since 2015	Coordinator/Co-leader of scientific group SG.2.1 Modelling and Design Tools, of European action HORIZON 2020 - COST ACTION MP 1401, Advanced Fibre Laser and Coherent Source as tools for Society, Manufacturing and Lifescience, European Cooperation in the field of Scientific and Technical Research COST.
Since 2014	Member of the Steering Board – Photonics and Electro-optics (FEO)/(AICT) Society for ICT/ Italian Society of Electrical, Electronic, Automation, Computer science and Communication Engineering.
Since 2014	Member of European HORIZON 2020 - COST ACTION MP 1401, Advanced Fibre Laser and Coherent Source as tools for Society, Manufacturing and Lifescience, European Cooperation in the field of Scientific and Technical Research http://www.cost.eu/domains_actions/mpns/Actions/MP1401
2014	Visiting Professor hosted by Rennes1 University, ISCR-Glass and Ceramics UMR 6226, Francia
From 2012 to 2015	Member of the Steering Commettee of the interdepartimental "Magna Grecia" research center for the 3-year period 2012/2015 - Elected on 23/10/2012 at the Department of Electrical and Information Engineering of Politecnico di Bari.
2011	Visiting Professor hosted by the Institute for Photonics & Advanced Sensing (IPAS), Adelaide, Australia
Since 2010	Head of the research group MOE - Microwave and Optical Engineering group, of Politecnico di Bari http://dei.poliba.it/francesco-prudenzano/ http://moe-group.poliba.it/ https://research.poliba.it/laboratories/moe
From October 2009 to October 2012	Chair of Teaching Council of the I (bachelor) and II (master) degree University Courses in Information Engineering - Elected for the second mandate by the teaching Council of the Faculty di Engineering II of Politecnico di Bari placed in Taranto (courses: Bachelor of Information Engeneering, Bachelor of Industrial and Electronic Systems – Electronic Systems curriculum, Master of Information Engineering, Master of Electronic Engineering).
2008	Visiting Professor hosted by the Institut de Recherche en Ingénierie Moléculaire et Matériaux Fonctionnels, UMR CNRS, Le Mans, Francia.
From 2008 to 2012	Project Leader of the working group P.3.3 Photonic crystal fibres, within the European COST ACTION MP0702 "Towards functional sub-wavelength photonic structure" New functionalities. (http://cost-mp0702.nit.eu/cost-mp0702/working-group-3) European Cooperation in the field Scientific and Technical Research COST 2008-2012.
From October 2006 to October 2012	Chair of Teaching Council of the I (bachelor) and II (master) degree University Courses in Information Engineering - Elected by the teaching Council of the Faculty of Engineering II of Politecnico di Bari placed in Taranto.
20th December 2003	Associate Professor of Electromagnetic Fields, Scientific Discipline Sector ING-INF/02 Electromagnetic Fields, at Department di Environmental and Sustainability Engineering of Politecnico di Bari - Taranto (Italy).
1 February 2001	Tenured Assistant Professor of Electromagnetic fields - Scientific Discipline Sector ING-INF/02 Electromagnetic Fields at Department of Electrical and Electronic Engineering of Politecnico di Bari.
From 1998 to 2001	Functionary technologist – official eight level – technical/scientific and social/health area at the Department of Electrical and Electronic Engineering of Politecnico di Bari

GRANTS & PROJECTS

For what that pertaining the research in the field of microwave devives, antennas, optical amplifiers and lasers, planar and optical fiber devices, he was direct responsible for more than **6 million euros funds:**

Since 2024	Scientific Responsible of Politecnico di Bari research unit - Dipartimento di Ingegneria Elettrica e dell'informazione of the project HORIZON-MSCA-2023-SE-01 Number: 101182995 Project name: ALTER-Q Cr4+:YAG/Polymer nanocomposite as alternative materials for Q-switched lasers: properties, modeling, and applications; Project duration: 48 monthsAction HORIZON TMA MSCA Staff Exchanges; European Research Executive Agency Project end date: 30 September 2028, in cooperation with Universidade de Aveiro (Uaveiro), Campus Niversitário De Santiago, Aveiro, Portugal (Principal Investigator); Graphene Energy Sp Zoo (Gren), Wroclaw Poland; Zilinska Univerzita V Ziline (Uniza), Slovakia; At Crystals, S. R. O. (Atc), Slovakia; Instytut Fizyki Polskiej Akademii Nauk (If Pan), Warszawa Poland; Scientific Research Company Electron-Carat Branch Of Private Joint Stock Company Concern-Electron (Carat), Ukraine; Lviv Polytechnic National University (Lpnu), Ukraine (27600 keuro for Politecnico di Bari research unit).
Since 2023	Responsibile of the work package WP4–Unconventional solutions for array synthesis del Progetto: DREAMS Antennas&Devices foR mixing, dEtection And Manipulation of mmWaves, within the national plan Piano Nazionale di Ripresa e Resilienza (PNRR), Missione 4 Componente 2 Investimento 1.3 – Creazione di "Partenariati estesi alle

Università, ai centri di ricerca, alle aziende per il finanziamento di progetti di ricerca base", funded by European Union – NextGenerationEU (**572 Keuro** for the work package WP4 Politecnico di Bari).

Since 2023 — Scientific Responsible of Politecnico di Bari research unit - Dipartimento di Ingegneria Elettrica e dell'informazione within the PRIN 2022, Progetti di Ricerca di Rilevante Interesse Nazionale – Bando 2022 PNRR – DD n. 1181 del 27-07-2023 – two years period - Progetto interuniversitario nazionale dal titolo: " InnoVative tEchnoloGies for non-invasivE assessmenT of plAnt healTh conditIon to support precisiOn farmiNg (VEGETATION)" in cooperation with l'Università degli Studi di Napoli "Parthenope" (PI Prof. Maurizio Migliaccio) l'Università degli Studi di Cagliari (**78 Keuro** for Politecnico di Bari research unit).

Since 2021 — Responsible of the research activities of WP7 Fibre Pigtailing & Combining, of the project H2020 "PASSEPARTOUT Photonic Accurate and Portable Sensor Systems Exploiting Photo-Acoustic and Photo-Thermal Based Spectroscopy for Real-Time Outdoor Air Pollution Monitoring", PASSEPARTOUT, n. 101016956, 36 month duration, call H2020-ICT-37-2020 "Advancing photonics technologies and application driven photonics components and the innovation echosystem". Responsible of Politecnico di Bari Prof. Vincenzo Spagnolo – project in cooperation with Cork Institute of Technology Ireland, Università degli Studi di Bari Aldo Moro Italy, Nanoplus Nanosystems and Technologies GmbH Germany, Green Lab Hungary Engineering Ltd Hungary, Politecnico di Bari Italy, Argotech AS Czech Republic; TU-WIEN Technische Universität Wien Austria; TUM Technische Universität München Germany; ETG Risorse e Tecnologia S.r.l. Italy; CNRS Centre National de la Recherche Scientifique – Université Côte d'Azur France; Ecospray Technologies S.r.l. Italy; VAR Vario-Optics AG Switzerland; TSKY Techno Sky Italy; FHNW University of Applied Sciences and Arts Northwestern Switzerland , Haze Instruments d.o.o. Slovenia; LVF Le Verre Fluoré France; AUG-H Signals Hellas Greece; Comune di Bari Italy (**165 keuro** for research activity coordinated by Prof. Prudenzano WP7 Fibre Pigtailing & Combining)

Since 2020 — Responsible of the research activities OR3 (A 3.5 e A 3.6) OR2 (A 2.1) of the electromagnetic field group within the MIUR project "Agriculture Green & Digital – AGREED", PNR 2015 – 2020, MIUR ", n. ARS01_00254, 36 duration, Responsible for Politecnico di Bari Prof. Vito Gallo – project in cooperation with Corvallis S.p.A, Adron Technology, Horta, CMC S.r.l., Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (Fondazione CMCC), Consorzio Interuniversitario Nazionale per l'Informatica - CINI, Infobiotech S.r.l., CIHEAM Istituto Agronomico Mediterraneo di Bari (IAMB), UKE - Università Kore di ENNA - (**370 keuro** for research activity OR3 (A 3.5 e A 3.6) OR2 (A 2.1)

Since 2019 — Responsible of the research activity Task 3.3 Research Activity Title "Fiber optic systems for space application" – 30 months duration, within the project PON "New Satellite Generation Components (NSG)", (**240k euro** for research activity Task 3.3);

2019 — Scientific Responsible of the fund FRA 2019 (Athenaeum research fund) - two year period – Project Title: "Fiber optical sensors for civile and space infrastructure"

2017 — Responsible of the research activity AR - A.2.1.1 Research Activity Title "Analisys and electromagnetic design of an applicator for thermal ablation" within the project FESR-FSE 2014-2020 "SINACH – Integrated navigation for mini invasive, surgery" BLNGWP7 call INNONETWORK D.D. dated 17/07/2017, n. 92. Scientific Responsible for Politecnico di Bari Prof. Filippo Attivissimo - Project in cooperation with MASMEC SpA , NEETRA SrL (PMI), GEOPHYSICAL APPLICATIONS PROCESSING (GAP) SrL (PMI), UNIVERSITA' DEGLI STUDI DI BARI, CONSIGLIO NAZIONALE DELLE RICERCHE, Istituto di Tecnologie Industriali e Automazione ITIA CNR - (**70k** euro for research activity AR - A.2.1.1 coordinated by Prof. Prudenzano)

2016 — Scientific Responsible of Politecnico di Bari research unit – Project title "ERHA, Advanced Radiotherapy with hadrons", call DM 1 Giugno 2016" Horizon PON 2016-2020"", D.D. 22/12/2016 (**1293 keuro** for the Politecnico di Bari research unit).

2016-2018 — Scientific Responsible of the fund FRA 2016 (Athenaeum research fund) - two year period – Project Title: "Design of resonant cavities for particle accelerators".

From 2012 to 2015 — Scientific Responsible of Politecnico di Bari research unit - Project title "Advanced Mini invasive Systems for Diagnosis and hadron therapy AMIDERHA" - three year period - project PON Research and Competitivity 2007-2013 Region Convergence – Axis I – Operative Objective I.3 1 "network for strengthening scientific/technological potential" Action Project code : PON02_00576_3329762/1 del 26/11/12 (**950k euro** for the Politecnico di Bari research unit).

From 2012 to 2015 — Scientific Responsible of Politecnico di Bari research unit - PON02_00576 _3329762/F1 DD MIU R n.818/Ric. del 26/11/12 Project title "Advanced qualification di n.12 graduated students and n.8 undergraduate students in scientific disciplines, for development, design experimentation of signal processing and smart diagnostics in the biomedical area" – within the project PON Research and Competitivity 2007-2013 Region Convergence – Axis I – Operative Objective I.3 1 "network for strengthening scientific/technological potential" "Advanced Mini invasive Systems for Diagnosis and hadron therapy AMIDERHA" - (**94k euro** for the Politecnico di Bari training unit).

From 2012 to 2015 — Scientific Responsible of Electromagnetic Field Section of Politecnico di Bari - Project title " "Strengthening of structures and scientific equipments of scientific and technological pole Magna Grecia" – three-year period – Operative National Program "Research & Competitivity" (PON "R&C") 2007-2013 Call n. 254/Ric. del 18 maggio 2011 – Axis I - D. D. MIUR del 11 novembre 2011 n. 957/Ric. Project code PONa3_00298 - (**815k euro** for the Electromagnetic Field Section of Politecnico di Bari).

From 2012 to2015 — Scientific Responsible for the Politecnico di Bari research unit of the research project – Project title "Advanced Mini invasive Systems for Diagnosis and hadron therapy AMIDERHA" - three year period - project PON Research and Competivity 2007-2013 Region Convergence – Axis I – Operative Objective I.3 1 "network for strengthening scientical/technological potential" Action Project code : PON02_00576_3329762/1 del 26/11/12 Project in cooperation with ITEL, Masmec, CNR NNL di Lecce, IRCCS Casa Sollievo della Sofferenza S.Giovanni Rotondo (Fg), Consortium CETMA - (**950k euro** for the Politecnico di Bari research unit).

From 2012 to 2015 — Scientific Responsible of Politecnico di Bari research unit - Project title "Training of novel professional profiles within Substrate Integrated Waveguide (SIW) technologies for microwave ICT application" within the research project Research & Competitivity PON R&C 2007-2013 - Region Convergence Axis I – Call D.D. n.01/Ric. del 18/01/2010 – Project Title "Development of Substrate Integrated Waveguide (SIW) technologies for microwave ICT application" – cod. id. PON01_01224/2 – CUP B91C11000240005 (Ricerca) - (**173k euro** for the Politecnico di Bari unit).

From 2012 to 2015 — Scientific Responsible of Politecnico di Bari research unit - Project title "Development of Substrate Integrated Waveguide (SIW) technologies for microwave ICT application" - three year period - project PON "Research and Competivity 2007-2013 Region Convergence – Axis I – Project code : PON01_01224" - Call D.D. MIUR January 18, 2010, n.01/Ric - (**1637k euro** for the Politecnico di Bari research unit).

2012-2014 — Scientific Responsible of the fund FRA 2012 (Athenaeum research fund) – two year period – Project title: "Design of resonant cavities for linear"

2007 — Scientific Responsible of Politecnico di Bari research unit and **National Coordinator** of the European Project Galileo 2007 UIF having title "Modelling and fabrication of optical device prototypes for high performance communication systems" (Scientific Committee of UIF Italian-French University) (**10k euro**).

From 2004 to 2006 — Scientific Responsible of the research unit of Politecnico di Bari - II Faculty of Engineering DIASS - Department di Environmental and Sustainability Engineering of Politecnico di Bari - Taranto (Italy) within the fund PRIN 2004 – two-year period – Research Program of Relevant National Interest (40%). Inter universities project having title: "Nanocomposite glasses for photonics", having title: "Lineguides for fabrication of activated glass ceramics high transparency for photonics: mpodels for characterization and feasibility of optical devices" - (**40k euro**).

2004 — Relevant technical-scientific contributions to the research activity of DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari, pertaining to the project "High Brilliance Fiber Laser in ytterbium doped doble cladding fiber, 100W, CW", within the fund FIB-LAS-2004.07: Development and application of fiber lasers. FAR. Project. Sect. 5 D.L. 297/99 – MIUR n. 5910 co-proponents RTM, Quanta System, INFM, Politecnico di Bari-DEE, Centro Laser - Responsible for Politecnico di Bari unit Prof. Marco De Sario.

2003 — Relervant technical-scientific contributions to the research activity pertaining to the the project "Nonlinear Optical sensor for temperature monitoring of train electrical engine pantograph" of DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari, within the fund FISR 2003 - two year period - "Optical and Electrooptica Sensors for Industrial and Environmental application" line a1.2. - Co-proponents CNR-IFAC di Firenze, MERMEC di Monopoli (BA) – Responsible for Politecnico di Bari unit Prof. Marco De Sario.

2003-2005 — Scientific Responsible of the fund FRA 2003 (Athenaeum research fund) - two year period – Project title: "Temperature sensor based on second order cascade nonlinearity in PPLN waveguides "

2001-2003 — Scientific Responsible of the fund FRA 2001 (Athenaeum research fund) - two year period – Project title: "Temperature sensor based on second order cascade nonlinearity in PPLN waveguides"

2001 — Responsible of relevant technical-scientific contributions to the research activity of DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari, pertaining to the project "Polymeric Optical fiber Sensor Fiber Sensor, experimental set-up fabrication", within the MIUR plan PON 2000/2006, D.M. 11/10/2001- two year period - "Novel strategies of reclamation and monitoring of water pollution via innovative materials", co-proponents Eni R&M – RAFTA, EniTecnologie, RGA, Politecnico Bari, CNR IRSA, Responsible for Politecnico di Bari unit Prof.ssa Concetta Giasi.

LINK WITH TERRITORY AND TECHNOLOGY TRANSFER

2024 — Prof. Prudenzano submitted a patent request having title High beam quality optical fiber combiner for multiwavelength signal delivering, with the enterprise Le Verre Fluoré (Francia). Authors: Francesco Anelli, Andrea Annunziato, Solenn Cozic, Paul Le Pays Du Teilleul, Samuel Poulain, Request number: 812024000051568 on 19/03/2024

2021 — Technical-Scientific Responsible of a contract between the DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari and Plurima Software SRL "Fast monitoring of aflatoxines in milk" pertaining to the optimization of a portable spectroscopy set up (90 Keuro, July 2021).

2016 — Technical-Scientific Expert for the Regional Administrative Court (TAR) of Lazio - with the task given on 29/07/2016 by the Rector of Politecnico di Bari as a consequence of the TAR ordinance 7863/2016 Reg. Prov. Coll. - Ricorso 15424/2015 Reg, Ric. Regarding the petition of the Broadcasting enterprise Emmedue srl versus the MISE Italian Ministry - Ministero Sviluppo Economico, Ispettorato Territoriale Puglia Basilicata e Molise - and the broadcasting enterprise Società Radio Italia SpA. (2016)

2015 Technical-Scientific Responsible of a contract between the DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari and OPTEL InP Consortium- Title " Investigation of characteristics and parameters of material processing optimization and laser micro-processing of ceramic AlN (Aluminium Nitride) substrates and LCP (Liquid Cristal Polymer) substrates, via UV laser beam for high frequency electronic application" (8 keuro, September 2015).

2011 (PATENT) Prof. Prudenzano is co-author of an Italian Patent (regarding the using technology) employed by EMITECH S.R.L. (BA) for a commercial production of equipment for earth disinfestation in greenhouse via electromagnetic technology. The Italian patent data are: n. Brevetto 0000266975 del 03 maggio 2011, Tipologia M. utilità - Application n. BA2007U000053 - Registration 02/08/2007 title "Greenhouse earth disinfestation from biological infesting diseases", Owner subjects: EMITECH S.R.L. (BA) e PRUDENZANO FRANCESCO (TA) - Inventors: DIAFERIA NICOLA e PRUDENZANO FRANCESCO

2010 Technical-Scientific Expert for the Public Prosecutor Office, with the task of measuring/verifying the electromagnetic field levels at high frequency in the city of Volturino - Proc. pen .n. 3586/05, Public Prosecutor office of Lucera (2010)

2006 Technical-Scientific Responsible of a contract between the DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari and the City of Manduria (TA) for the measurement of electromagnetic fields and monitoring of human exposure to electromagnetic fields with reference to the national and district rules in the range from 300kHz to 3 GHz for mobile phone applications (5 keuro, September 2006).

2006 Technical-Scientific Responsible of a contract between the DEE - Department of Electrical and Electronic Engineering of Politecnico di Bari and the City of Statte (TA) for the placement optimization of antennas in urban developing planning; measurement of electromagnetic fields and monitoring the human exposure to electromagnetic fields with reference to the national and district rules (30 keuro, September 2006).

TEACHING

2024 Fiber Optic Propagarion " 6 ECTS - I year course of Master in Telecommunication Engineering; "Microwave and Antennas Mod II" 6 ECTS – III year course of Bachelor in Electronic and Telecommunication Engineering; "Wereable Antennas " 6 ECTS - I year course of Master in Medical System Engineering. Supervisor of 3 PhD students and one contract researcher

From 2022 to 2023 "Fiber Optic Propagarion " 6 ECTS - I year course of Master in Telecommunication Engineering; "Microwave and Antennas Mod II" 6 ECTS – III year course of Bachelor in Electronic and Telecommunication Engineering; "Radiating Systems " 6 ECTS - I year course of Master in Electronic Engineering. Supervisor of 3 PhD students and one contract researcher

from 2003 to 2021 The official teaching activity included a high number (from a minimum of 12 ECTS to 30 ECTS per year) of courses among which "Fiber Optic Propagarion " 6 ECTS - I year course of Master in Telecommunication Engineering; "Microwave and Antennas Mod II" 6 ECTS – III year course of Bachelor in Electronic Engineering. "wereable antennas " 6 ECTS - II year course of Master in Medical System Engineering; "Electromagnetic Fields" 6 ECTS and "Industrial Application of microwave" 6 ECTS – III year course of Bachelor in Information Engineering II Faculty of Engineering of Politecnico di Bari, "Microwave" 6 ECTS - I year master degree I Faculty of Engineering of Politecnico di Bari. Supervisor of a number of PhD students and contract researchers.

f rom 1992 to 2022 From academic year 1992/93 to 2001/2002 he delivered cycles of seminars, theoretical and experimental exercitations supporting the official courses of the scientific sector discipline SSD ING-INF/02 Electromagnetic fields.

EDUCATION AND TRAINING

May 1997 Doctor of Philosophy degree (VIII cycle) in Electromagnetism curriculum.

1996 Post-university course on teaching methodology "Methodology and didactics", at the Literature and Philosophy Faculty University of Bari

1992 He won the secondary school teacher position of Electronics, class XL – Electronics, D.M. dated 23/3/90 with first place in merit rating of Bari district

1992 He won one of the thirty research grants on Electrooptics banded by Italian National Research Council (C.N.R), call n. 201.12.67/1 G.U. dated 26/09/90 with first place in merit rating for the theme "Electro-optics Technologies".

1991 In 1991 he won one of the twenty research grants banded by Aerospace Italian Agency (ASI), call n.1 G.U. 95 dated 30/11/90 with first place in merit rating for the two themes on Electronics and Automatics: 1) Technologies of solid state and/or Integrated Electronics, 2) Control and Automation.

4 aprile 1990 Second Level Degree (Master Degree) in Electronic Engineering on April 4, 1990.

SELECTED PUBLICATIONS

PUBLICATIONS: He has co-authored over **470 publications (292 indexed in Scopus):** n. 133 International Journal with ISSN, n. 39 Proceedings of SPIE con ISSN, n. 185 International Conferences, n. 1 International Volume and n. 8 Contributions in International Volumes, n. 3 National Journals, n. 103 National Conferences.

Here ten publications:

A. M. LOCONSOLE, M. C. FALCONI, A. ANNUNZIATO, S. COZIC, S. POULAIN AND F. PRUDENZANO, "Design of a Mid-IR Laser Based on a Ho:Nd-codoped Fluoroindate Fiber," in Journal of Lightwave Technology, vol. 41, no. 2, pp. 702-708, 15 Jan.15, 2023, doi: 10.1109/JLT.2022.3218190.

M. C. FALCONI, A. M. LOCONSOLE, A. ANNUNZIATO, S. COZIC, S. POULAIN AND F. PRUDENZANO, "Design of a Broadband Erbium-Doped Fluoroindate Fiber Laser Emitting Up to 3.91 μm," in Journal of Lightwave Technology, vol. 41, no. 18, pp. 6065-6072, 15 Sept.15, 2023, doi: 10.1109/JLT.2023.3275168.

F. ANELLI, A. ANNUNZIATO, M. GODFREY, A. M. LOCONSOLE, C. HOLMES AND F. PRUDENZANO, "Effects of Curvature on Flexible Bragg Grating in Off-Axis Core: Theory and Experiment," in Journal of Lightwave Technology, vol. 41, no. 9, pp. 2904-2910, 1 May1, 2023, doi: 10.1109/JLT.2023.3238427.

A.ANNUNZIATO, F. ANELLI, P. LE PAYS DU TEILLEUL, S. COZIC, S. POULAIN AND F. PRUDENZANO, “Fused Optical Fiber Combiner Based on Indium Fluoride Glass: New Perspectives for Mid-IR Applications” Optics Express Vol. 30, Issue 24, pp. 44160-44174 (2022) https://doi.org/10.1364/OE.471090

V. BASILE, M. GRANDE, V. MARROCCO, D. LANEVE, S. PETRIGNANI, F. PRUDENZANO, and I. FASSI, “Design and manufacturing of super-shaped dielectric resonator antennas for 5G applications using stereolithography” IEEE Access, May 2020, pp 82929 - 82937 DOI: 10.1109/ACCESS.2020.2991358

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PERSONAL SKILLS

Mother tongue: Italian

Other language: English (good level for speaking, excellent level for writing)

Communication skills: Refined during the teaching experience, research teams and projects management, link with enterprises, leading of scientific societies, relating with companies.

Organisational / managerial skills: Leadership – research project leading. Now he is the chief of MOE-Microwave ad Optical Engineering group, Vice chair of CoRiFI-Coordinamento Ricerca Innovazione Fotonica Italia dell'AEIT- 2018-2020; Delegate to teaching coordination of the Electrical and Information Engineering Department. Past-president of SIOF (Società Italiana di Ottica e Fotonica) – EOS European Optical Society Italian branch. Member of the Administration Council and of the Strategic Board of the technical University Politecnico di Bari.

PERSONAL DATA
I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Codice in materia di protezione dei dati personali" and the European Regulation (EU) No. 679 of 27 April 2016. This curriculum is written as a declaration substituting the certification/ declaration substituting the affidavit, according to the italian rule art.46 and 47 of D.P.R. n. 445/2000 The undersigned Francesco Prudenzano, aware that the false declarations imply the application of the penal sanctions foreseen by the art. 76 of the D.P.R. 445/2000, declares that the information contained in the Curriculum Vitae, including the list of publications, is true.

Signature

Bari 20/07/2024