

# **CURRICULUM VITAE of Antonella Bogoni**

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**PERSONAL DATA**

Name: Antonella  
Surname: Bogoni  
Birth date: March, 20 1972  
Birth place: Mantova (Italy)  
Nationality: Italian  
Residence: Via Carmignani 6 –56127 Pisa Italy

**EDUCATION**

2004 and 1997 **PhD & master degree** from Electronic Engineering, Parma University, Italy

**CURRENT & PREVIOUS POSITIONS**

2020-2021 **Technical Responsible of the Integrated Photonic Technologies Center – INPHOTEC**, of SSA, in Pisa, Italy, [www.inphotec.it](http://www.inphotec.it). INPHOTEC is a foundry with about 12 technicians and a value >15 M€.

From 2019 **Director** of the National Laboratory of Photonic Networks and Technologies (**PNTLab**)- Inter-University National Consortium for Telecommunications (CNIT) in Pisa-Italy [www. https://www.cnit.it/laboratori-nazionali/pntlab/](http://www.cnit.it/laboratori-nazionali/pntlab/) (30-40 people)

From 2019 **Coordinator** of the “communication” macro-area of Institute of Communication, Information and Perception Technologies (TeCIP) of SSSA (about 60 people)

From 2015 **Associate Professor** at SSSA - TECIP  
**Leader of digital and microwave photonics area** of TeCIP (about 10-16 people)

2010-2015 **CNIT head of digital and microwave photonics area** at the PNTLab  
2006-2010 **CNIT head of research** at the PNTLab  
2001-2006 **CNIT senior researcher** at the PNTLab  
2000-2001 **CNIT researcher** at the optical communications laboratory of the University of Parma

1997 - 1999 **Marconi Communications grant** at the Marconi Laboratory of Parma University.

## SUMMARY OF THE MAIN ACHIEVEMENTS

### Ability to attract funds

- 48 Grants From 2004 she is **Scientific responsible for TECIP or CNIT-PNTLab** of 18 EU Projects (including 3 ERC, 8 H2020/FP7 and 1 European Space Agency), 5 International projects, (USA Government 2, NATO 1), 12 National Projects (2 from Ministry of University and Research, 2 from Ministry of Foreign Affairs, 3 from the Ministry of Defense, and 5 from the Italian Space Agency), 5 Regional projects and 8 industrial projects. She has been Principal Investigator/coordinator in 27 of them (including 2 H2020 and 1 PRIN and 1 FISR project)
- >12.5M€ Fundings She raised research **funds for her Institutions exceeding 10 M€** and she led her team for obtaining further 2.5 M€

### *Main projects with consortium coordinator role*

- 2021-2023 Coordinator of the project “COSMOS: Photonics-based COherent SAR constellation for Multistatic and multispectral satellite Earth ObServation” funded by the Ministry of Education, Universities and Research-FISR program (special supplementary fund for research) Total funded budget (SSSA is the only partner): 1.12 M€
- 2020-2022 Coordinator of the project “SPACEBEAM: SPACE SAR system with reconfigurable integrated photonic BEAMforming”, funded by European Community (H2020-SPACE-14-TEC-2018-2019). Total funded budget: 3 M€
- 2019-2021 Coordinator of “PIOTS: Packaged integrated photonics-based RF/optical hybrid transceiver key-elements for sensing and communication” funded by the European Space Agency. Total funded budget 1.1 M€
- 2015-2018 Coordinator of the project “ROAM: Revolutionising optical fibre transmission and networking using the Orbital Angular Momentum of light” funded by European Community (H2020-ICT-06-2014). Total funded budget: 3.37M€
- 2009-2013 European Research Council Starting Grant for the project: “PHODIR: PHOtonic-based full DIgital Radar” Total funded budget (CNIT was the only partner): 1.6M€

### Scientific achievements

- Scientific production She has been **co-author of 2 books, 9 chapters, 177 Journal papers** (including 1 tutorial and 21 invited papers), **412 contributions at international conferences** (including 7 plenary/tutorial and 79 invited contributions). The 84% of the Journal production is in Q1 Journals.

**Total H-index between 28 and 34** (34 from Google Scholar, 32 from Scopus, 28 from ISI-web of knowledge). Total number of Citations > 5500 (from Google Scholar)

Tecnology  
Transfer

Her activity led to **55 international patents**

Her activities were supported by National and International companies i.e. Ericsson, Elettronica Spa, Leonardo, Thales Alenia Spspace, RFI, Veoneer, Angel group.

She collaborated within institutional projects with OHB, IBM, Huawei, Thales and other several smaller companies

form 2006-2011 she was **Co-founder of Photrix** a start up company manufacturing and selling ultra high speed optical instrumentation (2007-2011 **President and CEO**)

*Main international scientific roles*

- From 2021            **Scientific Responsible of the Agreement** on “Photonics for Space” between **SSSA and Italian Space Agency** and of the agreement between **CNIT and Italian Space Agency**
- 2020                **Key innovator** for two different activities in the **European Commission's Innovation Radar platform**
- From 2019           **Italian representative at the Europeam Management Committee of ECOC** (European Conference on Optical Communication)
- 2014/2021         **General chairman at MWP2021** (IEEE International Meeting on Microwave Photonics) Virtual conference, and at **PS2014** (IEEE Photonics in Switching 2014), July 2014, San Diego, California
- 2018                **Co-technical Chair at ECOC18** (European Conference on Optical Communication), Rome, Italy Sept 2018, and at **PS2014** (IEEE Photonics in Switching 2014), July 2013, Osaka, Japan.
- 2014-2020         **Topical Editor for Optics Letters, Q1 Journal, ISSN: 0146-9592, 2013 Impact Factor: 4.526**
- 2014                **Publication on NATURE** “A fully photonics-based coherent radar system”, Nature, Vol. 507, pp. 341–345, 20 March 2014.
- 2014                **Selection** for paper review in “**research news&views**” **session of NATURE** for the paper “A fully photonics-based coherent radar system”, by J.D. McKinney, US Naval Research Laboratory, USA
- From 2004           Editor of **8 special issues** on Q1 and Editor of **8 special issues** on Q1 and Q2 scientific Journals Q2 scientific Journals and she **organized 12 special sessions and workshops** at international events

**Member** of several **Editorial boards**, of **technical committees** of International Conferences, of **Board of reviewers** of International Journals and Books, as Wiley Editor, Nature and Nature Photonics, and of several research project and CV selection platforms in Europe.

**Reviewer of scientific projects and academic positions** by 15 evaluation platforms in 10 different countries

*Main scientific awards*

- From 2010            **6 Best student paper awards and 2 Best paper awards at international conferences**
- 2021                 Sant’Anna School **award for the best scientific production among associate professors** for the year 2019
- 2009-2017         She obtained 3 **ERC grants** (1 StG in 2009, 2 PoC in 2012 and 2015), and the eligibility for an ERC CoG grant in 2014, which was not funded for limited financial resources. Final panel score: A (fully meets the ERC's excellence criterion and is recommended for funding if sufficient funds are available)  
She was also selected as a success story for her StG project, for representing the ERC in the presentation of the ERC program to the European Commissioner (24/01/2017)
- 2015-2017         **Special visiting professor scholarship within the Brazilian programme: “Programa Ciência Sem Fronteiras – Bolsas No País- Modalidade Pesquisador Visitante Especial – PVE-2014”**, funded by CAPES, Brazil
- 2009-2010         **Fulbright advanced research scholarship** for the project “Design and implementation of a 640 Gb/s OTDM system” at University Southern California, Los Angeles, CA, USA

*Scientific activity as visiting professor*

- 2015-2017         **Special visiting professor for 6 months at INATEL**, Santa Rita do Sepucaí, Brazil
- 2008-2010         **Visiting professor** for 3 months in 2008 and 8 months with a **Fulbright advanced research scholarship** in 2010 at University Southern California, Los Angeles. CA

*Innovative implementations in the international state of the art:*

- 2004                 320Gb/s and then 640Gb/s all-optical regenerator for optical time division multiplexing (OTDM) signals
- 2010                 640Gb/s all-optical logic gate
- 2014                 photonics-based radar system
- 2020                 coherent multi-band photonics-based radar on chip
- 2020                 coherent combined radar/lidar system on chip

**Main teaching and tutoring activity**

From 2016	<b>Professor</b> of the course “Photonics Laboratory for Telecommunications” at SSSA for PhD and master students and University of Pisa for master students
From 2015	<b>Professor</b> of “Microwave photonics”, and “photonics in switching” at SSSA for master and PhD student within the international master Programme on Photonic Integrated Circuits, Sensors and Networks (PIXNET)
From 2020	<b>Professor</b> of “How to write a scientific paper” for master students at SSSA
2020-2021	<b>Professor</b> of “Optical and Opto-electronic systems” for Genoa University within the Master “Advanced complex systems”
2015-2018	<b>Professor</b> of “Photonics in switching” at SSSA for master and PhD students, within the international master programme on Photonic Network Engineering (MAPNET)

*Student supervision activity*

36 master students

18 PhD students

*Researcher supervision activity*

17 researchers

*PhD Thesis External Examiner*

11 theses in UK (2), Ireland, Germany, Spain, The Netherland, France, Australia, India, Italy (2)

**Other Main Professional achievements**

2017 National qualification for **Full Professor** position

1998 **Qualification for engineering profession**

*SSSA institutional roles*

From 2019 Member of the “emerging Technology” PhD committee at SSSA

From 2019 Member of the SSSA committee for the evaluation of the student off-site stays in the engineering sector

2020 Member of the Student evaluation Committee

FULL LIST OF AWARDS	
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- |           |  |
|-----------|--|
| 2021      | Sant'Anna School <b>award for the best scientific production among associate professors</b> for the year 2019  |
| 2020      | Inclusion in <b>the European Commission's Innovation Radar</b> platform as key innovator for the Innovation on OAM and wavelength switch and OAM multiplexer based on omega-shaped device, obtained within the H2020 Project <b>ROAM</b> (coordinated By Antonella Bogoni-CNIT)                            |
| 2017      | <b>Best student paper award in International Conference on Radar Systems 2017</b> for “High Precision Displacement Measurements in presence of Multiple Scatterers using a Photonics-based Dual-band Radar”  |
| 2017      | <b>IEEE Charles Kao Award</b> for best optical communications & networking paper with the JOCN paper "Sliceable Transponder Architecture Including Multiwavelength Source"   |
| 2017      | She was <b>selected as a success story for her StG project</b> , for representing the ERC in the presentation of the ERC program to the European Commissioner (24/01/2017)   |
| 2016      | <b>Honorable Mention</b> for the paper: S. Melo, S. Pinna, F. Laghezza, F. Scotti, I. F. da Costa, D. H. Spadoti, Arismar Cerqueira S. Jr. and A. Bogoni “Photonics-based dual-use Transceiver based on a single dual-band Antenna Array”, XXXIV Simpósio Brasileiro De Telecomunicações, September, 2016. |
| 2015-2017 | <b>Special visiting professor scholarship within the Brazilian programme: “Programa Ciência Sem Fronteiras – Bolsas No País- Modalidade Pesquisador Visitante Especial – PVE-2014”</b> , funded by CAPES, Brazil   |
| 2015      | <b>Best paper award for the most significant advance in radar state-of-the-art at EuRAD 2015, Paris</b> , for “Coherent Radar/Lidar Integrated Architecture”   |
| 2015      | <b>European Research Council Proof of Concept Grant</b> for the project “ <b>PETRA: Photonic Environment moniTORing &amp; Risk Assessment</b> ”  |
| 2015      | <b>Eligibility to ERC CoG grant</b> , not finded for financial unavailability (Final panel score: A (fully meets the ERC’s excellence criterion and is recommended for funding if sufficient funds are available)  |
| 2014      | <b>2014 Elettronica Prize</b> , "Optical RF scanner"   |
| 2012      | <b>European Research Council Proof of Concept Grant</b> for the project “ <b>PREPaRE: PRE-industrial Photonic-based Radar dEsign</b> ”   |
| 2009-2013 | <b>European Research Council Starting Grant</b> for the project: “ <b>PHODIR: PHOtonic-based full DIgital Radar</b> ” (1’600 k€)   |
| 2009-2010 | <b>Fulbright advanced research scholarship</b> for the project “Design and   |

implementation of a 640 Gb/s OTDM system” at University Southern California, Los Angeles, CA, USA

- 2013 “Isabella D’Este” Italian **Award for Scientific Research**,by Colline Moreniche Association Italy, September 2013.
- 2014 **Best student paper award in International Radar Symposium 2014** for “Field trial of the first Photonic-Based Radar for Maritime Border Security and Harbor Protection”
- 2013 **Best student paper award in IEEE Photonics in Switching 2013 Conference** for “Laser Spectral-Purity Impact in Optical Processing of QPSK Signals in PPLN Waveguide”
- 2012 **Best paper award selection in International Conference on Radar System** for “Photonic generation of microwave phase coded radar signal”
- 2012 **Keynote speech selection** within **OPTRO 2012 – 5<sup>th</sup> International Symposium on Optronics in Defense and Security** for “**Flexible Photonic Generation of Low-Phase-Noise Phase-Coded Radar Pulses**”
- 2010 **Best paper award in IEEE ICC 2010 - Optical Networks and Systems Symposium** for “Optical Bistability in a Nonlinear Resonator With Saturable Losses and Intensity-Dependent Refractive Index”



## FULL LIST OF PROJECTS

### PI/consortium coordination role:

- 2021-2024 She is the coordinator of the project “**OCLOCK: Tunable high-frequency low-noise RF oscillators based on integrated photonics**” funded by funded by the Air Force Office of Scientific Research AFRL-USA
- 2021-2022 She is the coordinator of the project “**ESTIMATOR - dESign opTimizatIon of coherent Mimo rAdar neTwORks enabled by photonics**” funded by funded by the Office of Naval Research ONR-USA
- 2021-2023 She is the person in charge for Sant’anna School of advanced Studies of the project “**COSMOS: Photonics-based COherent SAR constellation for Multistatic and multispectral satellite Earth ObServation**” funded by funded by the **Ministry of Education, Universities and Research-FISR** program (special supplementary fund for research)
- 2020-2021 Coordinator of the project “**DIVINE High-speed 3D-imaging of blood vessels based on optical signal processing**”, funded by Fondazione Pisa, Italy
- 2020 She is the person in charge of the industrial project “**HEFESTO breadboard**” funded by **LEONARDO**
- 2020-2022 She is coordinator of the project “**SPACEBEAM: SPACE SAR system with reconfigurable integrated photonic BEAMforming**” funded by **European Commission (H2020)**
- 2019 Industrial project “**Feasibility Study of a Demonstrator for an High Energy Laser**” funded by **LEONARDO**
- 2019-2021 Coordinator of “**MULTIRADAR-PIC: Photonic-based multiband radar transceiver on chip**” funded by **Italian Defence**.
- 2019-2021 Coordinator of “**DISTURB: Development of a photonIcs-aSsisTed UltRa-wide Band (0.5-40GHz) RF jammer**” funded by **Italian Defence**.
- 2019-2022 Coordinator of “**PIOTS: Packaged integrated photonics-based RF/optical hybrid transceiver key-elements for sensing and communication**” funded by the **European Space Agency**
- 2019-2021 Principal Investigator of “**SCORPIUS: Development on chip of a multifrequency optical oscillator for radars in space**” funded by the **Italian Space Agency ASI**
- 2019-2021 She is person in charge for Sant’Anna School of Advanced Studies of the project “**LIRAS: LIdar and RADar in Space**” funded by **Angel group**
- 2018-2019 She is the coordinator of the industrial project “**Photonics-based radar for automotive**” funded by **Veoneer**
- 2017-2020 Principal Investigator of “**SOLE: multiStatic & multiband cOherent radar**”

- fL**leet for border **sE**curity”, funded by **NATO** within the Science for Peace and Security Programme (SPS)
- 2017-2020 Principal Investigator of “**RODI: Rf/Optical combined coherent transceiver for Radar/Idar and RF/optical communications in space**” funded by the **Italian Space Agency ASI**
- 2017-2020 Principal Investigator of “**POINTING: Photonics-based frequency-agile RF transceiver with High Precision Optical Beamforming for satellite rad/com systems**” funded by the **Italian Space Agency ASI**
- 2017-2020 Principal Investigator of “**PREVENTION: Photonics-based advanced environment monitoring system for an enhanced pREVENTION of landslide and structural failure risks**”, within the **India-Italy Significant Bilateral Projects**, funded by **Ministry of Foreign Affair**.
- 2017-2020 Coordinator of the National project **PRIN** (Progetti di Ricerca di Interesse Nazionale) “**PHOOD: Novel PHOtonics-based RADAR/LIDAR cOMBined coherent sensor for aDvanced precision agriculture**” funded by the **Ministry of Education, Universities and Research**
- 2015-2017 She is coordinator of the project “**ROAM: Revolutionising optical fibre transmission and networking using the Orbital Angular Momentum of light**” funded by **European Commission (H2020)**
- 2015-2017 Italian coordinator of the Brazil-Italy project “**SWaP constrained photonic-assisted RF transceiver for aerospace, cognitive radio and remote sensing applications**”, funded by the **Brazilian Agency CAPES**.
- 2014-2015 Principal Investigator of “**PETRA: Photonic Environment moniTORing Risk Assessment**” within the **European Research Council Starting Grant “Proof of concept”**.
- 2014-2015 Principal Investigator of “**COMBINE: Multi-layer interconnection network based on optical angular momentum multiplexing & wavelength division multiplexing switching**”, within the **U.S.-Italy Significant Bilateral Projects**, funded by **Ministry of Foreign Affair**.
- 2013-2014 Principal Investigator of “**PREPaRE: PRE-industrial Photonic-based Radar dEsign**” within the **European Research Council Starting Grant “Proof of concept”**.
- 2009-2013 Principal Investigator of “**PHODIR: PHOtonic-based full DIgital Radar**” within the **European Research Council Starting Grant**.
- 2011-2012 Scientific person in charge of the project “**INSIDE: toward Integrated photoNic-aSSisted fully-dIgital raDAR transceIver.**” within the **European program Nexpresso**, “**Network for EXchange and PRototype Evaluation of photonicS componentS and Optical systems**”.
- 2009 Scientific person in charge of the project “**Nanophotonics for ultra-fast processing of moving.**” funded by **Fondazione Silvio Tronchetti Provera**.

- 2008 Scientific person in charge of the project “**Integrated time domain optical interleaver for photonic-based full-digital radar receiver**” within the **European program ACCORD** “Advanced Components Cooperation for Optoelectronics Research and Development”.
- 2004-2005 Scientific person in charge of the project: "**Realization of prototypes of ultra-short pulse optical source**" supported by **Fondazione Cassa di Risparmio di Pisa** – Italy.

**Role of Scientific Responsible for her Institution:**

- 2020-2024 She is the person in charge for Sant’Anna School of advanced Studies of the project “**PhotonHub Europe**” funded by **European Commission (H2020)**
- 2020-2022 She is the person in charge for Sant’anna School of advanced Studies of the project “**LINO: Advanced photonic integration platforms for developing high performance devices for telecommunications and quantum communication for space**” funded by **Italian Space Agency**
- 2020-2022 She is the person in charge for Sant’anna School of advanced Studies of the project “**IOV: Development of a space demonstrator of a Quantum CyberSecurity system**” funded by **Italian Space Agency**
- 2020-2022 She is She is scientific person in charge for CNIT of the project “**TeraSlice: Terahertz Analogue-to-Digital Conversion Using Soliton Frequency Combs and Massively Parallel Spectrally Sliced Detection**” funded by **European Commission (H2020)**
- 2019-2022 She is scientific person in charge for CNIT of the project “**PICTURE : Photonic Integrated CircuiTs for mUltiband RF transceiver in arrayed systEms**” funded by **European Defence Agency** .
- 2018-2020 Scientific responsible in charge for “**The BeeTag: an IoT Backscattering and Battery-free Sensor for Precision Agriculture Applications**” funded by the **Bank Fondation of Cassa di Risparmio di Pistoia e Pescia**
- 2018-2020 Principal Investigator of “**Label-free PoC device based on 3D photonic Bottlemicroresonators for real-time high-Sensitive measurement of disease relevant biomolecules**” funded by **Tuscany Region**
- 2017-2021 She is scientific person in charge for CNIT of the project “**EUIMWP European Network for High Performance Integrated Microwave Photonics**” funded by **European COST Program**.
- 2017 Coordinator of private contracts on “**PAI-PL Automatic protection systems for railway level crossing**” funded by the **National railway society RFI**
- 2017-2020 She is scientific person in charge for CNIT of the project “**ROBORDER: autonomous swarm of heterogeneous Robots for BORDER surveillance**” funded by **European Commission (H2020)**

- 2016-2017 She is scientific person in charge for CNIT of the project **“FUTURE : Radio FreqUency phoTonic technologies for eUropean militaRy systEmS”** funded by **European Defence Agency** .
- 2015-2016 She is coordinator of the industrial project **“Optical beamforming transceiver for 5G”**, funded by **Ericsson**.
- 2015-2018 She is scientific person in charge for CNIT of the project **“FIWIN5G: Fiber-Wireless Integrated Networks for 5th Generation delivery”** funded by **European Commission (H2020)**.
- 2014-2017 Supervision of the private contract **“Design of the RF spectrum scanner prototype based on discrete components”**  
Funded by **Elettronica Spa**.
- 2014-2016 She is scientific person in charge for CNIT of the project **“RAPIDO: Revolutionary Advances in Photonics Integration Being Applied for Optical Communication”** funded by **European Commission (FP 7)**.
- 2012-2014 Scientific person in charge for Photonic Networks National Laboratory-CNIT of the project **“SOPHIA: Software-defined multicarrier wideband transceiver based on photonic technologies for TLC wireless applications”** funded by **Italian Defense Ministry**.
- 2009-2012 She is scientific person in charge of the project **“ACEPLAN “ACTivE PLAsmoNics and lossless metamaterials”** funded by **European Consortium NanoSci-ERA**.
- 2008-2010 Scientific person in charge for Photonic Networks National Laboratory-CNIT of the project **“GOSPEL “Governing the Speed of Light”** by the **European Commission (FP 7)**.
- 2006 Co-coordinator of the project **“Feasibility study for 100 Gb/s Ethernet transport”** funded by **Ericsson**.

### **Other projects**

She has been involved in the **following projects** as **coordinator of the digital and microwave photonics group**:

- 2013-2016 **MIUR project “MINOS: Micro- and Nano-structured photonic devices based on strained silicon for ultrafast Switching in datacom applications”**, FIRB, funded by the **Ministry of Education, University and Research**
- 2012-2015 **“ARNO: Integrated optical packet networks for access and transport”** funded by **Tuscany Region**
- 2008-2010 **MIUR Project “Integrated subsystems for optical fibre communications fabricated through ion implantation of erbium-doped waveguides.”** funded

by the **Ministry of University and of the Scientific and Technologic Research.**

- 2008-2012 **EUROFOS Project “Pan-European Photonics Task Force: Integrating Europe’s Expertise on Photonic Subsystems”** (Network of Excellence) funded by **European Commission (FP 7).**
- 2008-2010 **BONE project, "Building the Future Optical Network in Europe"** funded by **European Commission (FP 7).**
- 2007-2009 **MIUR project “Photonic Enabling Devices for Regeneration and Optical Switching (PEDROS)”**, funded by the Ministry of University and of the Scientific and Technologic Research, for the international bilateral cooperation with Canada.
- 2007-2009 **MIUR project “Laboratory for PhOtonic switching nETworks (POET)”**, funded by the Ministry of University and of the Scientific and Technologic Research, for the international bilateral cooperation with India.
- 2006-2008 **MAE Indian-Italian Science and Technologic Collaboration, “Enabling technologies for the design and implementation of next generation optical internet prototype based on optical packet switching”** with Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India; funded by the Ministry of Foreign Affair.
- 2006-2008 **Progetto e-Photon/One+, "Optical Networks: Towards Bandwidth Manageability and Cost Efficiency"** by **European Commission (FP 6).**
- 2005-2007 **MIUR project “Optical Transmission Systems with Coherent Detection”**, funded by the Ministry of University and of the Scientific and Technologic Research.
- 2004-2006 **Progetto e-Photon/ONE, "Optical Networks: Towards Bandwidth Manageability and Cost Efficiency"** project by **European Commission (FP 6).**
- 2004-2006 **MAE Korean-Italian Science and Technologic Collaboration, “Future optical communication networks beyond 160 Gbit/s based on Optical Time Division Multiplexing (OTDM) involving ultrafast photonic devices”** with Institute of Science & Technology (KIST) Seoul, Korea; funded by the Ministry of Foreign Affair.
- 2003-2004 **DWDM ring networks:** Design and implementation of DWDM EDFA- based ring networks in collaboration with **Marconi Communications.**
- 2002-2004 **MAE Indian-Italian Science and Technologic Collaboration, “Design of packet switched re-configurable DWDM network with wavelength conversion for multimedia”** with Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India; funded by the Ministry of Foreign Affair.
- 2002-2004 **MIUR project "CENTRE FOR COMMUNICATION NETWORKS ENGINEERING"** . Funded by the Ministry of University and of the Scientific

and Technologic Research

She was **group leader** for the workpackage 5, research line 1 "*Reliable optical source at more than 100 Gbit/s*" and research line 2 "*Modulating and multiplexing in the optical domain*".

- 2001-2003      **MIUR project "Transmission on very-high bit rate OTDM systems"** funded by the Ministry of University and of the Scientific and Technologic Research.
- 2000-2002      **LOBSTER project "Large Optical Bandwidth by amplifier Systems based on Tellurite fibres doped with Rare earths"** funded by the **European Commission (FP 5)**.
- 2000-2001      **PMD COMPENSATION project:** Fabrication of an heterodyne receiver for the frequency measurement of the Stokes parameter in a PMD compensator scheme for high bit-rate communication systems, funded by **Marconi Communications**.
- 1999-2001      **MIUR project "Subsystems and techniques for very-high-bit-rate OTDM"** funded by the Ministry of University and of the Scientific and Technologic Research.
- 1998-1999      **"Nonlinear effects in WDM systems"** funded by **Marconi Communications**.
- 1997-1999      **Projects ODIN in collaboration with Marconi-Telecom Italia**.
- 1996-1998      **DAWRON Project "Desing of Advanced Routed Optical Networks"** funded by **European Commission INCO-DC**

<b>FULL LIST OF TECHNICAL PROGRAMME COMMITTEE PARTICIPATIONS AND EVENTS ORGANIZATION</b>
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*Technical Programme Committees*

2022	Technical committee member of the Pacific Rim Conference on Lasers and Electro-Optics ( <b>CLEO-Pacific Rim</b> ), Sapporo Japan, 2022
2021	Program Committee member of <b>SPIE Photonex</b> , Glasgow, September 2021.
From 2019	Technical committee member of the International Conference on Information Optics and Photonics ( <b>CIOP</b> )
From 2017	Technical committee member of International Radar Symposium ( <b>IRS</b> ) and International Meeting on Microwave Photonics ( <b>MWP</b> )
From 2015	Technical committee member of IEEE International Conference on Communications ( <b>ICC</b> )-Symposium on Millimeter-wave communications and International Microwave and Optoelectronic Conference ( <b>IMOC</b> )
From 2014	Technical committee member of Photonics and Optoelectronics Meetings ( <b>POEM</b> ), The Tenth Advanced International Conference on Telecommunications ( <b>AICT</b> ), The 13th International Conference on Optical Communications and Networks ( <b>ICOON</b> )
2014-2017	Technical committee member of European Conference on Optical Communication ( <b>ECOC</b> )
2013-2014	Technical committee of <b>Conference on Electronics, Telecommunications and Computers</b> , Lisbon, Portugal, December 2013
2012	Technical and organizing committee member of IEEE International Conference on Computers and Devices for Communication ( <b>CODEC</b> ), December 2012, Kolkata, India and for <b>International Workshop on Telecommunications</b> , Santa Rita do Sapucaí, Brazil
From 2012	Technical committee member of <b>Photoptics</b> and Conference on Electronics, Telecommunications and Computers ( <b>CETC</b> ).
2009	Technical committee member of <b>Fotonica</b> , Pisa, Italy May 2009
2007-2015	Technical committee member of IEEE International Conference on Photonics in Switching ( <b>PS</b> )
2004-2007	Technical committee member of the Optical Amplifiers and their Applications ( <b>OAA</b> )

*Charing and organization activity*

2021	<b>Co-chair of the special session “Microwave Photonics for Radars” at the CIE International Conference on Radar</b> , Haikou China, December 2021
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- 2021                    **General Chairman** of IEEE International Meeting on Microwave Photonics (MWP), Pisa, Italy, November 2021
- 2021                    **Co-organizing the “Microwave Photonics” Workshop** in the 26th Optoelectronics and Communications Conference (OECC), Hong Kong, China, May 2021
- From 2019            **Italian representative at the European Management Committee** of the European Conference on Optical Communication (ECOC)
- 2018                    **Co-program Chair** at European Conference on Optical Communication (ECOC), Rome, Italy September 2018
- 2018                    **Workshop organization:** “What will be the role of microwave photonics in 5G and beyond?” at European Conference on Optical Communication (ECOC), Rome, Italy, September 2018
- 2017                    **Co-chair of the Special Session “mmW radars”**, at the International Radar Symposium (IRS), Prague, Czech Republic, June 2017
- 2016                    **Co-chair of the Workshop** on “Fiber-Wireless Network Technologies and Architectures towards 5G and Beyond” at the 18th International Conference on Transparent Optical Networks (ICTON), Trento, Italy, July 2016
- 2016                    **Co-chair of the Special Session “Photonics for 5G and beyond”** within the Tyrrhenian International Workshop on Digital Communications, Livorno, Italy, September 2016
- From 2015            **Steering Committee member** of IEEE International Conference on Photonics in Switching and Computing (PSC)
- 2015                    **Workshop organization** “Microwave photonics” at European Conference on Optical Communication (ECOC) Valencia, Spain, September 2015
- 2015                    **Sub-committee Chair** at European Conference on Optical Communication (ECOC), Valencia, Spain, September 2015
- 2014                    **General co- Chairman** of IEEE International Conference on Photonics in Switching (PS), San Diego, USA, July 2014
- 2014                    **Workshop organization:** “Photonics for RADAR systems”, within the European Radar Conference (EURAD), Rome, Italy, October 2014
- 2013                    **Technical Chairman** of IEEE International Conference on Photonics in Switching (PS), Osaka, Japan, July 2013
- From 2009            **Organizing committee member** of IEEE International Conference on Photonics in Switching (PS)



- 2008            **Workshop organization “All-optical memories and flip-flops”** at IEEE International Conference on Photonics in Switching (**PS**), Sapporo, Japan August 2008
- 2007            **Workshop organization “Digital photonics for signal processing in broad-band all-optical communication”** at IEEE International Conference on Photonics in Switching (**PS**), San Francisco, USA, August 2007
- 2007            **Organizing committee member of 2007 Japan-Italy Bilateral Workshop on Photonics for Communication**, Osaka, Japan, July 2007
- 2006            **Organizing committee member of 2006 China-Italy Bilateral Workshop on Photonics for Communication and Sensing**, Xi'an, China, October 2006
- 2004            **Organizing committee member** of the international conference IFIP Optical Networks & Technologies (**OpNeTec**), Pisa, Italy, October 2004

FULL LIST OF ACTIVITIES FOR PROJECT AND ACCADEMIC POSITION REVISION	
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From 2021	Reviewer for the <b>Fundacao para Ciencia e a Tecnologia</b> (Portugal) and for the <b>Ministerio de Ciencia e innovacion</b> (Spain) <b>research project evaluation platforms</b>
From 2020	Reviewer for the <b>University and Research Ministry (MUR)</b>
From 2019	Reviewer for the <b>European Research Council</b>
From 2018	Reviewer for the <b>Fare-Cineca (Italia)</b> , and “ <b>Ministry of Education and Science of the Russian Federation</b> ” (Russia) <b>research project evaluation platforms</b>
From 2015	Reviewer for <b>ICREA e INPHINIT</b> (Spain) <b>research project evaluation platforms</b>
From 2014	Reviewer for the <b>European Commission within H2020 programme</b>
2013	Evaluator in the framework of the Joint call <b>ERAfrica</b>
From 2007	Reviewer for <b>the European Commission within FP7, Semaphore (France/Belgium), Archimedes and Thalys (Greece)</b> <b>research project evaluation platforms</b>
1998	<b>External member of the committee</b> for school-leaving exam at Istituto Tecnico ITIS-ST A. Berenini in Fidenza, Parma.

FULL LIST OF EDITORIAL ACTIVITIES	
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2021	<b>Co-Guest Editor</b> of the Special Issue “6G Mobile Networks”, on IEEE Journal of Lightwave Technology, Vol. 34, n. 5, 2016, (ISSN: 07338724, 15582213)
2021	<b>Co-Guest Editor</b> of the Special Issue “Radio Frequency (RF) Photonics”, on MPDI Photonics (ISSN 2304-6732), to be published in 2022
2019	<b>Co-Guest Editor</b> of the Special Issue “the 44th European Conference on Optical Communication”, on IEEE Journal of Lightwave Technology, Vol. 37, n. 5, 2019, (ISSN: 07338724, 15582213), Impact Factor: 5.096, Q1 Journal
2017	<b>Co-Guest Editor</b> of the Special Issue “Optical Signal Processing: Advances and Perspectives”, MPDI Applied Sciences, (ISSN 2076-3417 (Q1 Journal)
2017	<b>Co-Guest Editor</b> of the Special Issue "Optical Networks for Communications", MPDI Photonics (ISSN: 23046732), Q1/Q2
2017	<b>Co-Guest Editor</b> of the Special Issue “Ultrashort Optical Pulse” MPDI Applied Sciences (ISSN 2076-3417), Q1 Journal
2016	<b>Co-Guest Editor</b> of the Special Issue on European Conference on Optical Communication on IEEE Journal of Lightwave Technology, Vol. 34, n. 5, 2016, (ISSN: 07338724, 15582213), Impact Factor: 4.331, Q1 Journal
2014-20120	<b>Topical Editor</b> for Optics Letters, (ISSN: 0146-9592, 2013) Impact Factor: 4.526, Q1 Journal
2014	<b>Co-Guest Editor</b> of the Special Issue "All Optical Networks for Communications", by MPDI photonics (ISSN 2304-6732)
From 2014	<b>Editorial board member</b> of Frontiers of Optoelectronics (ISSN: 2095- 2759, Q2 Journal) end MPDI photonics (ISSN: 23046732), Q1/Q2 journal depending on the year
2013-2019	<b>Editorial board member</b> of Chinese Journal of Engineering (ISSN 23148063)
2012-2014	<b>Editorial board member</b> of MPDI Photonics (ISSN 2304-6732)
2011	<b>Editorial board member</b> of Hindawi
From 2004	She is in the <b>Board of reviewers</b> of Wiley Editor, Nature Photonics, IEEE/OSA Journal of Lightwave Technology, IEEE Journal of Selected Topics in Quantum Electronics, IEEE Journal of Quantum Electronics, IEEE Photonics Technology Letters, IEEE Photonics Journal, IEE Electronics Letters, OSA Optics Express, OSA Optics Letters, Elsevier Optics Communications, Chinese Optics Letters Optics and Laser Technology, Optical Fiber Technology.

FULL LIST OF TEACHING ACTIVITIES	
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From 2020	<b>Professor</b> of “How to write a scientific paper” for master students at SSSA
2020-2021	<b>Professor</b> of “Optical and Opto-electronic systems” for Genoa University within the Master “Advanced complex systems”
From 2016	<b>Professor</b> of the course “Photonics Laboratory for Telecommunications” at SSSA for PhD and master students and University of Pisa for master students
From 2015	<b>Professor</b> of “Microwave photonics”, and “photonics in switching” at SSSA for master and PhD student within the international master Programme on Photonic Integrated Circuits, Sensors and Networks (PIXNET)
2015-2018	<b>Professor</b> of “Photonics in switching” at SSSA for master and PhD students, within the international Master Programme on Photonic Network Engineering (MAPNET)
2017	<b>Lecturer</b> of “Photonics functionalities for 5G and beyond”, Ljubljana Winter school within the H2020 Project “FIWIN5G: Fiber-Wireless Integrated Networks for 5th Generation delivery”
2016	<b>Lecturer</b> of “Photonics for Communications” within the 96° orientation course organized by the Scuola Normale Superiore, San Miniato-Pisa, Italy, July 2016
2013-2014	She is <b>contract professor</b> of “Digital and microwave photonics” within the International Master “Smart Solutions- smart community” of SSSA, sponsored by Telecom
2006-2015	She is <b>contract professor</b> of “Photonics in switching”, within the International Master on Communication Networks Engineering organized by SSSA
2009	<b>Lecturer</b> of “Digital photonic processing for next generation high capacity optical networks and optical computing” within the Summer School of Information Engineering, Bressanone, Italy
2005	She has been <b>lecturer</b> in the Training Course on “Fibre optics for optical fibre communications”, in Cape Coast, Ghana
2004-2006	<b>Contract Professor</b> within the "Optical Communications" course at Pisa University in Pisa Italy.
2004	<b>Contract Professor</b> within the “Calculator networks” course at Engineering Faculty of University of Pavia in Mantova.
2003-2007	<b>Contract Professor</b> within the project "Optical Fiber Communications" at ISIS Mattei Institute, Rosignano Italy.

## FULL LIST OF SUPERVISED MASTER & PHD THESES AND RESEARCHERS

### Master Theses: candidate name, and thesis details

1. Ashraf Haris “Optical phase arrays for optical scanning/lidar”, SSSA, Osaka University, 2021
2. David Sanchez “A 3D Processing Algorithm for a Photonics-based Multiple-Input Multiple-Output Radar System”, KIT - Karlsruhe Institute of Technology, 2019
3. Claudia Mineo “Implementazione e caratterizzazione di un sistema LIDAR/DIAL per misure di umidità nell'Agricoltura di Precisione”, University of Pisa, 2019
4. Ortensio Formisano “Design of a photonic-based multifrequency oscillator for radar applications”, University of Pisa, 2018
5. Giuseppe Olivo “Coherent LIDAR systems for measurements of absorption in precise agriculture”, University of Pisa, 2017 (unofficial supervisor)
6. Milad Khosravian “High Precision Displacement Measurements via differential phase estimation using a Photonics-based Dual-band Radar System”, University of Pisa, 2017
7. Dario Bertozzi “Progetto ed implementazione di un ADC fotonico time-interleaved”, University of Pisa, 2013
8. Umar Shahzad “Photonic based Radar: Characterization of 1x4 Mach-Zehnder Demultiplexer”, University of Pisa, 2012
9. Nicolaos P. Diamantopoulos “Modelling of an optical threshold element based on SOAs” International Master on Photonic Networks engineering (MAPNET) SSSA, 2012
10. Weiming Yao, “Dispersion tolerance of all-optical modulation format conversion from NRZ-OOK to RZ-(D)QPSK using XPM in nonlinear fiber” International Master on Photonic Networks engineering (MAPNET), SSSA-University of Osaka, 2012
11. Sophie Lange, “Investigation and pre-compensation of SOA induced phase distortions in 16 QAM signals in optical coherent systems” International Master on Photonic Networks engineering (MAPNET), SSSA-University of Osaka, 2012
12. Papoui abasse Alexandre Manga “Uso di SOA come elementi non lineari per applicazioni di elaborazione ottica”, University of Pisa, 2009
13. Alessandro Lapesa “Analisi e realizzazione di un campionatore ottico basato sul Four Wave Mixing in diversità di polarizzazione per segnali ultra-veloci” University of Pisa, 2009
14. Paolo Venturini “Ottimizzazione della procedura di giunzione per diverse tipologie di fibre ottiche”, University of Pisa, 2007
15. Chiara Bergamo “Analisi di un campionatore ottico quasi-asincrono basato su cross-phase modulation per segnali ultra-veloci”, University of Pisa, 2007
16. Marie Florence Matchouani “Analisi e implementazione di un ricevitore rigenerato basato sul NOLM per segnali a larga banda”, University of Pisa, 2007
17. Davide Benassi, “Sviluppo di Software per il calcolo della dispersione e del rumore di ampiezza di sorgenti ottiche impulsate”, University of Pisa, 2006
18. Luca Perondi “Caratterizzazione dei dispositivi a semiconduttore per la realizzazione di un commutatore completamente ottico”, University of Pisa, 2006
19. Alessandro Simi “Implementazione di una porta logica ottica riconfigurabile ed integrabile basata su un singolo SOA”, University of Pisa, 2005
20. Alessandro Simi “Implementazione di una porta logica ottica riconfigurabile ed integrabile basata su un singolo SOA”, University of Pisa, 2005
21. Dario Bertozzi “Progetto ed Implementazione di un ADC Fotonico Time-Interleaved” University of Pisa, 2013
22. Gianluca berrettini “Sviluppo di una sorgente di impulsi ultracorti mediante tecnica Mode Locking in configurazione Sigma”, University of Pisa, 2005
23. Francesco Mencacci “Analisi numerica e realizzazione sperimentale di un compressore di impulsi basato su fibra comb-like a dispersione decrescente”, University of Pisa, 2004
24. Francesco Fresi “Utilizzo di fibre ad elevato coefficiente nonlineare in strutture interferometriche di tipo NOLM”, University of Pisa, 2004
25. Daniele Porciani “Realizzazione di un oscilloscopio a campionamento ottico basato su FWM in fibra per segnali ultra-veloci”, University of Pisa, 2004
26. Nicodemo Baffa “Applicazioni degli assorbitori saturabili a semiconduttore nelle comunicazioni su portante ottica”, University of Pisa, 2004
27. Sonia Pozella “Caratterizzazione e compensazione degli effetti di dispersione cromatica in sottosistemi OTDM ad altissima capacità”, University of Pisa, 2004
28. Roberto Proietti “Realizzazione di porte logiche ultraveloci sfruttando effetti ottici nonlineari”, University of Pisa, 2004
29. Claudia Cantini “Realizzazione di un commutatore ultraveloce di flussi dati ottici basato su effetti non lineari in fibra”, University of Pisa, 2004

30. Gianluca Meloni “Automodulazione di fase in amplificatori a semiconduttore per la rigenerazione nelle trasmissioni ottiche ultraveloci”, University of Pisa, 2003
31. Francesco De Luca “Progetto e realizzazione di strumentazione per la misura dei parametri di polarizzazione in sistemi di trasmissione su fibra ottica ad alta capacità”, University of Pisa, 2002
32. Alessio Bizzi “Sviluppo di un simulatore di amplificatori ottici (SOA) e suo impiego nella realizzazione di un modulatore ottico ultraveloce per sistemi OTDM”, University of Parma, 2001
33. Alfredo Greco “Analisi, realizzazione e caratterizzazione di un compensatore per la dispersione di polarizzazione in sistemi ottici ad alta velocità di trasmissione”, University of Pisa, 2001
34. Filippo Ponzini “Progettazione e realizzazione di un sistema di sincronizzazione di una sorgente laser Mode Locking rigenerativa per sistemi di comunicazione ottici OTDM”, University of Parma, 2001
35. Paolo Ghelfi “Simulazione e realizzazione di sorgenti laser impulsate per trasmissioni OTDM con tecniche di Mode Locking e Gain Switching”, University of Parma, 2000
36. Mirco Scaffardi, “Analisi, progetto e realizzazione sperimentale di un apparato di demultiplazione per sistemi OTDM ad elevatissima bit rate”, University of Parma, 2000

**PhD Theses: candidate name, thesis details and current position**

1. Federico Camponeschi PhD ongoing
2. Leonardo Lembo “A Photonics based Multiple Input Multiple Output Coherent Radar Network for Maritime Surveillance and High Resolution Applications”, SSSA, 2019  
Currently at Italian Defense Ministry, Italy
3. Bilal Hussain “hallenges in implementation of Microwave Photonics systems for Radar Applications”, SSSA, 2019  
Currently at University of Porto, Portugal
4. Muhammad Nouman Malik “Development of Orbital Angular Momentum (OAM)-based subsystems for Communication and Sensing”, SSSA, 2019  
Currently at BAE systems, UK
5. Suzanne Assis de S. Melo, “Interferometric radar system including a photonics-based architecture for remote sensing applications”, SSSA, 2017  
Currently at European Gravitational Observatory, Italy
6. Daniel Onori “Photonics-assisted RF Receivers for Electronic Support Measures” SSSA, 2017  
Currently at Institut national de la recherche scientifique, Canada
7. Sergio Pinna “Photonic circuits for communications and surveillance: from the concept to the field trial”, SSSA, 2014  
Currently at Univeristy California of Santa Barbara/Rockley Photonics, USA
8. Aurora Baruzzi “Multi-Sensor Multi-Target Tracking”, University of Pisa, 2014  
Currently at BMW group, Italy
9. Giovanni Serafino “Photonic solutions for digital processing and microwave subsystems”, SSSA, 2013  
Currently at SSSA, Italy
10. Emma Lazzeri “Analysis, design and implementation of optical digital processing subsystems” SSSA, 2013  
Currently at GARR The Italian Research & Education Network, Italy
11. Francesco Laghezza “Photonic Technologies for Radar and Telecommunications Systems”, University of Pisa, 2012  
Currently at NXP Semiconductor, The Netherland
12. Nguyen Truong An “Ultrafast optical signal generation, processing techniques and applications”, SSSA, 2011  
Currently at Infinera, USA
13. Antonio Malacarne “Optical Subsystems for Analog and Digital Signal Processing”, SSSA, 2009  
Currently at CNIT, Italy
14. Gianluca Berrettini “Advanced Photonic Processing for Next Generation Optical Networks”, SSSA, 2009  
Currently at Fosber S.p.A., Italy
15. Francesco Fresi “Photonics techniques for high bandwidth next generation optical networks”, SSSA 2009
16. Gianluca Meloni “Highly non linear fiber applications for telecommunication sub-systems and sampling techniques”, SSSA, 2008  
Fosber S.p.A., Italy
17. Mirco Scaffardi “Analysis and implementation of all-optical techniques for pulse compression and regeneration in a 160Gbit/S OTDM system, SSSA, 2005 (external supervisor)  
Currently at SSSA, Italy
18. Claudio Porzi, “Design analysis and implementation of novel subsystems for optics”, 2004. SSSA, Italy (external supervisor)  
Currently at SSSA, Italy

## Supervised researchers

1. Suzanne Assis de S. Melo, currently at European Gravitational Observatory, Italy
2. Sergio Pinna, currently at Univeristy California of Santa Barbara/Rockley Photonics, USA
3. Giovanni Serafino, currently at SSSA, Italy
4. Emma Lazzeri, at GARR The Italian Research & Education Network, Italy
5. Francesco Laghezza Currently at NXP Semiconductor, The Netherland
6. Antonio Malacarne, currently at CNIT, Italy
7. Claudio Porzi, currently at SSSA, Italy
8. Mirco Scaffardi, currently at CNIT, Italy
9. Filippo Scotti, currently at CNIT, Italy
10. Paolo Ghelfi, currently at CNIT, Italy
11. Salvatore Maresca, currently at SSSA, Italy
12. Manuel Reza, currently at SSSA, Italy
13. Valeria Vercesi, currently at University College London, UK
14. Hum Parajuli
15. Gaurav Pandey, currently at SSSA
16. Fabio Falconi, currently at Ministry of Education
17. Andreia Aparecida de Castro Alves, currently at Instituto Nacional de Telecomunicações, Brazil

## FULL LIST OF PATENTS

1. Malacarne A., **Bogoni A.**, Ghelfi P., Scaffardi M., Celi S., (2020) B10/1399 (patent filling) - Apparato per tomografia ottica a coerenza di fase
2. Ghelfi P., Malacarne A., Maresca S., Scotti F., **Bogoni A.**, Brunnegard O., Eriksson O., (2019). EP3816669A1 - A coherent multi-antenna radar transceiver
3. Ghelfi P., **Bogoni A.**, Porzi C., Serafino G., Sorianello V., Puleri M., D'Errico A., (2016). WO2017118482A1 - Opto-electronic oscillator and method of generating an electrical carrier signal
4. Ghelfi P., **Bogoni A.**, D'Errico A., Puleri M., (2015). WO2017020968A1 - Network node and method for photonic beamforming
5. Puleri M., D'Errico A., Pepe T., **Bogoni A.**, Ghelfi P., Scotti F., Laghezza L., (2015). WO2016142001A1 - Multipoint transmission and reception in a radio communication network
6. Puleri M., D'Errico A., **Bogoni A.**, Ghelfi P., (2016). WO2017118480A1 - Transmitting and receiving apparatuses and methods for a phased array antenna
7. Puleri M., D'Errico A., **Bogoni A.**, Ghelfi P., (2015). WO2016142000A1 - A receiver for a phased array antenna
8. Ghelfi P., Scotti F., Laghezza F., Serafino G., Onori D., **Bogoni A.**, (2014). WO2016026528A1 - A transceiver for a phased array antenna
9. Albertoni A., Tafuto A., Bartocci M., Gemma M., Mazzoli R., Onori D., Laghezza F., Ghelfi P., Pinna S., Scotti F., Serafino G., **Bogoni A.**, (2015). WO2017067617A1 - Improved photonic-assisted RF spectrum scanner for ultra-wide band receivers
10. Albertoni A., Tafuto A., Bartocci M., Gemma M., Mazzoli R., Onori D., Laghezza F., Ghelfi P., Pinna S., Scotti F., Serafino G., **Bogoni A.**, (2015). WO2015132772A2 (A3) - Photonic-assisted RF spectrum scanner for ultra-wide band receivers
11. Ghelfi P, Scotti F, Laghezza F, Serafino G, Pinna S, **Bogoni A** (2013). WO2015028091A1 - A signal generator for a phased array antenna
12. Scaffardi M, Andriolli N, **Bogoni A**, Cerutti I., Castoldi P (2013). WO2015024595A1 - Optical switching
13. D'Errico A, Cavaliere F, Giorgi L, **Bogoni A** (2013). WO2015096862A1 -FSO Communications Terminals for

## Connecting Telecommunications Cards

13. **Bogoni A**, Ghelfi P (2013) . WO2013164009A1 - Radio Frequency Signal Transceiver, Coherent Radar Receiver And Method Of Processing Radio Frequency Signals
14. Ghelfi P, Scotti F, Laghezza F, **Bogoni A** (2013). WO2013117216A1 - Photonic RF generator
15. Porzi C, Contestabile G, **Bogoni A** (2013) WO2013013695A1 - An optical switch and a method of switching an optical signal
16. **Bogoni A** (2013). WO2013079094A1 - A method of converting an optical communications signal and an optical receiver.
17. Bontempi F, Poti' L, **Bogoni A** (2011). US2011229069A1 (B2) - Planar Waveguide Circuit And Optical Receiver.
18. Scaffardi M, Berrettini G, **Bogoni A** (2011). US2012219290A1 (B2) - Optical Linear Feedback Circuit.
19. Ascari L, Poti' L, **Bogoni A** (2010). WO2011077203A2 (A3,A8) - Method For Spectroscopy And Imaging And Equipment For Carrying Out Said Method.
20. **Bogoni A**, Poti' L (2009). ITPI20090062A1 - Moltiplicatore Di Velocita' Di Segnalazione Ottica Con Multiplazione Del Dominio Del Tempo Basato Sul Ritardo Di Gruppo Differenziale Di Fibre Ottiche A Mantenimento Di Polarizzazione .
21. **Bogoni A**, Ghelfi P, Poti' L (2009). IT1397764B1 (A1) - Schema E Metodo Per La Parallelizzazione Dei Campioni Di Un Segnale A Radiofrequenza Ottenuti Per Campionamento Ottico Ad Elevata Frequenza Di Campionamento, Basata Sull'effetto Di Four Wave Mixing .
22. **Bogoni A**, Ghelfi P (2009). ITPI20100108A1 - Metodo Ed Apparato Per La Generazione Ottica Di Segnali A Radiofrequenza Per Radar Con Ricevitore A Campionamento Ottico.
23. Porzi C, Poti' L, **Bogoni A** (2009). WO2010091740A1 - Optical Digital-To-Analog Conversion.
24. Andriolli N, Raponi P, Castoldi P, **Bogoni A**, Poti' L, Bianchi A (2009). WO2010127716A1 - Synchronous Packet Switches.
25. Meloni G, Berrettini G, Poti' L, **Bogoni A**, D'errico A (2009). WO2011032609A1 - Optical Devices And Method Of Counting Optical Pulses.
26. **Bogoni A**, Poti' L, Scaffardi M, Ghelfi P (2009). W02011/038782 - Improvements In Extracting Optical Labels.
27. Scaffardi M, Berrettini G, Di Muro R, Nayar B, **Bogoni A**, Poti L (2008). WO2009040142A1 - Ethernet Transmitter Apparatus.
28. **Bogoni A**, Poti' L, Malacarne A, Fresi F (2008). WO2009068324A1 - Optical Sampling.
29. **Bogoni A**, Poti' L, Scaffardi M, Ghelfi P (2008). WO2009068327A1 - Optical Pulse Generation.
30. **Bogoni A**, Poti' L, Lazzeri E, Meloni G, Ponzini F (2008). W02009106145 - Optical Signal Processing.
31. **Bogoni A**, Poti' L, Fresi F, Cavaliere F, Berrettini G (2008). WO2009124588A1 - Improvements In Or Relating To Optical Networks.
32. Berrettini G, Malacarne A, Poti' L, **Bogoni A** (2008). W02009129866 - Optical Flip-Flop.
33. **Bogoni A**, Poti' L, Lazzeri E, Ghelfi P (2008). WO2009143897A1 - Apparatus And Method For Generating Optical Pulses.
34. **Bogoni A**, Poti' L, Scaffardi M, Lazzeri E, Fresi F (2008). WO2010049001A1 - Optical Analogue To Digital Converter.



35. **Bogoni A**, Scaffardi M, Poti' L (2007). W02008080636 – Sampling Of Optical Signals. Pct/Ep2007/050083
36. **Bogoni A**, Poti' L (2007). W02008131801A1 - Optical Node. Pct/Ep2007/054233
37. **Bogoni A**, Poti' L, Scaffardi M (2007). W02008131802 - All Optical Processing Circuit For Conflict Resolution And Switch Configuration In A 2x2 Optical Node.
38. **Bogoni A**, Poti' L, Scaffardi M (2007). W02008131803A1- All Optical Logic Gate Implementing Nor Function And Cascaded Nor/And Function. Pct/Ep2007/054235
39. **Bogoni A**, Poti' L, Scaffardi M, Andriolli N, Castoldi P (2007). W02009015689 - All Optical Batcher Banyan Switch, Batchers Switch, Banyan Switch And Contention Manager.
40. **Bogoni A**, Poti' L, Scaffardi M (2007). W02009015690 - Optical Circuit For Comparing Two N-Bit Binary Words.
41. **Bogoni A**, Poti' L, Andriolli N, Scaffardi M, Berrettini G, Castoldi P (2007). W02009015691 - An Optical Switching Controller.
42. **Bogoni A**, Poti' L, Porzi C (2007). W02009015692 - Optical Logic Device Using Saturable Absorber.
43. **Bogoni A**, Magri R, Ceccatelli R (2006). W02006125658A2 (A3) – Method and apparatus for restoration of operating conditions in Optical Networks
44. **Bogoni A**, Poti' L, Berrettini G, Malacarne A (2006). W02007039152 - Reconfigurable And Integrable Optical Logic Gate Based On A Single Soa.
45. Ghelfi P, Scaffardi M, **Bogoni A**, Poti' L (2006). W02007039225A1 - Optical Receiver Scheme With All-Optical Decision Element.
46. Berrettini G, Bogoni A, Poti' L (2006). W02008034459 - Optical Switch Assembly And Network Incorporating Same.
47. Andriolli N, Bogoni A, Poti' L, Malacarne A (2006). W02008034460A1 - Optical Waveguide Having Bistable Transmission States Suitable For Optical Logic Circuits.
48. **Bogoni A**, Poti' L, Scaffardi M (2006). W02008080419 - Optical Processing Apparatus.
49. **Bogoni A**, Meloni G, Poti' L, Scaffardi M (2005). ITMI20051803A1 - Metodo E Dispositivo Moltiplicatore Di Frequenza Tutto Ottico.
50. **Bogoni A**, Ghelfi P, Poti' L, Ponzini F (2005). W02006000508A1- Optical Logic Gate. Pct/Ep2005/052437
51. Porzi C, **Bogoni A**, Poti' L (2005). W02006058874A1- Multiplexer With Optical Add/Drop. Pct/Ep2005/056272
52. **Bogoni A**, Poti' L, Ponzini F (2004). W02005024363A1- High Temporal Resolution Optical Sampler And Sampling Method. Pct/Ep2004/052058
53. **Bogoni A**, Sacchi G, D'errico A, Di Pasquale F (2004). W02005025096A1- Looped Optical Network With Ase Light Recirculation And Link And Network Survivability Control System. Pct/Ep2004/052127
54. **Bogoni A**, Ghelfi P, Scaffardi M, Poti' L (2004). W02005027379 - Optical Signal Regenerator For High Bit-Rate Transmission Systems. Pct/Ep2004/051968
55. Poti' L, **Bogoni A** (2001). W00215450A1- Optical Transmission System. Pct/Ib2001/001709

## FULL LIST OF PUBLICATIONS

### **Books**

1. “Photonics for Radar Networks and Electronic Warfare Systems” Editors: Ghelfi, P, Laghezza F., **Bogoni A.**, IET SciTech Book Series: Radar, Antennas and Electromagnetics, 2019, ISBN: 9781785613760
2. **Bogoni**, L. Potì, “Elementi di Comunicazioni ottiche” Pitagora ed. Italy, 2003

### **Chapters**

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## Conferences

### Plenary Talks/Tutorials

1. **Bogoni A.**, “Photonic integrated modules for microwave systems”, The 26<sup>th</sup> Optoelectronics and Communications Conference (OECC21), July 2021 (virtual)
2. **Bogoni A.**, “Photonics for microwave systems”, 2019 International Topical Meeting on Microwave Photonics (MWP 2019), Ottawa, Canada, 2019.
3. Serafino G., **Bogoni A.**, “Photonics for New Generation Radar Systems”, 2018 International Conference on Microwave Photonics Technology and Application (MPTA), China, December 2018
4. Amato F., **Bogoni A.**, “Photonics-based environment monitoring system for an enhanced prevention of landslide and structural failure risks”, IEEE Optronix Conference, Kolkata, India, November, 2017
5. Scotti F., Laghezza F., Onori D., Ghelfi P., **Bogoni A.** “Photonics for Radar and EW systems”, International Microwave and Optoelectronic Conference (IMOC), Porto the Galinhas, Brazil, November 2015
6. **Bogoni A.**, “Photonics for new generation fully-digital radar and wireless communication systems: from the photonic-based RF signal generation to the optical RF sampling”, International Workshop on telecommunications, Brazil, May 2013.
7. **Bogoni A.** “Ultra-high speed sampling optical techniques”, SPIE Asia-Pacific Optical Communications (APOC) Hangzhou, Cina, October 2008

### Invited contributions

8. **Bogoni A.**, “Microwave Photonics for Remote Sensing”, 26<sup>th</sup> Optoelectronics and Communications Conference (OECC), July 2021 (Virtual)
9. Falconi F., Scotti F., Porzi C., Das Barman A., Ghelfi P., **Bogoni A.**, “Multiband radar based on integrated photonics”, 2021 International Conference on Microwave and Millimeter Wave Technology (ICMMT), Nanjing China, May 2021 (Virtual)
10. Maresca S., Lembo L., Scotti F., Serafino G., Malacarne A., Ghelfi P., **Bogoni A.**, “Coherent dual-band 2x4 MIMO radar experiment exploiting photonics”, International Union of Radio Science (URSI) conference, Italy, August 2020 (Virtual)
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The undersigned, Antonella Bogoni, declares that everything declared is true pursuant to the rules on self-declarations pursuant to art. 46 ss. of the Presidential Decree 445/2000;

The undersigned, Antonella Bogoni, declares that everything declared is true in accordance with the regulations on self-declarations pursuant to art. 46 and ss. of D.P.R. 445/2000;

La sottoscritta, Antonella Bogoni, dichiara che tutto quanto dichiarato corrisponde a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 e ss. del D.P.R. 445/2000;

Pisa, October 2021

A handwritten signature in black ink, appearing to read 'Antonella Bogoni', with a stylized flourish at the end.

Antonella Bogoni