

## Francesco Floris, Ph.D. in Physics

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### PROFESSIONAL TOPICS, INTERESTS AND SKILLS

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#### Topics

Nanotechnologies:  
Nanomaterials, Nanodevices and Nanoengineering.

#### Interests

Condensed Matter Physics for Optics, Photonics and Plasmonics: Research, Development, Modeling and Optimization; Spectroscopic Techniques; Microscopy Techniques; Conjugated Organic Materials and Metamaterials (especially Organic Nanofibers and Bragg Gratings); Surface Wave-Based Structures (in particular Bloch Surface Waves and Surface Plasmon Polaritons); Edge, Evanescent and Grating Couplers; Electromagnetic Computational Solving Methods.

- Hard skills**
- Fourier transform (FT) and dispersive spectroscopy, resolved in energy and time
  - surface coating techniques
  - vacuum and cryogenics related procedures
  - atomic force microscopy (AFM) and scanning electron microscopy (SEM)
  - finite-difference time-domain (FDTD) method based computational simulations
  - data analysis

- Computer Skills**
- Good command of
    - operative system environment Microsoft® Windows™
    - operative system environment Linux
    - programming language C/C++
    - high performance Maxwell equations solver Lumerical® FDTD Solutions™
    - optical design software Zemax OpticStudio®
    - multiphysics finite element analysis and solver software COMSOL Multiphysics®
    - data analysis software Origin™
    - programming language LabVIEW™
    - high level environment for numerical computation Matlab™
    - Microsoft® Office™ tools
    - markup language LaTeX
    - integrated devices design software KLayout
    - customized T-matrix and S-matrix codes for electromagnetic scattering calculations
    - customised Particle Swarm Optimized (PSO) Algorithm for photonic structure design
  - Sufficient command of
    - engineering math software Matcad™
    - programming language Python

## EDUCATION

- 2016** **Doctor of Philosophy Degree (Ph.D.)** in Physics, Curricula of Matter Physics  
Thesis Title: *Surface Electromagnetic Modes Application in Plasmonic and Photonic Nanostructures for Emitting and Sensing Devices*  
ISBN: 978-88-95767-90-1  
Advisor Prof. Franco Marabelli (Photonics and Nanostructures Optics Laboratory)  
Department of Physics - University of Pavia (Italy)
- From July 2015  
to January 2016 **Visiting Research Scholar**  
Supervisor Prof. Luca Dal Negro (Ultrafast Nanomaterials and Nanostructure Optics Laboratory)  
Photonics Center - Department of Electrical and Computer Engineering  
College of Engineering – Boston University – Massachusetts (USA)  
[Scholarship funded by the Italian Minister of the Instruction, University and Research through the “Pavia-Boston Exchange Project” Award]
- 2012** **Master’s Degree** in Physical Science, Curricula of Matter Physics  
Final Mark 109/110  
Thesis Title: *Polarized Light Photoinduced Absorption on an High Crystallinity Thin-film of Poly(p-phenylene vinylene) (PPV)*  
Advisor Prof. Franco Marabelli, Co-Advisor Prof. Davide Comoretto  
Department of Physics - University of Pavia (Italy)
- 2010** **Bachelor’s Degree** in Physics, Curricula of General Physics  
Final Mark 102/110  
Thesis Title: *Amplification of Spontaneous Emission and Laser Action in Heteroepitaxial Organic Nanofibers*  
Advisor Prof. Giovanni Bongiovanni, Co-Advisor Dr. Francesco Quochi  
Department of Physics - University of Cagliari (Italy)
- 1999** **Scientific A Level**  
Final Mark 97/100  
Liceo Scientifico Statale “Antonio Pacinotti”, Cagliari (Italy)

PROFESSIONAL  
EXPERIENCE

- 2022/Present **Contract Researcher RTDa** at the Department of Physics  
University of Pavia (Italy)
- 2017/2021 **Post-doctoral Research Fellow** at the Photonics Center of the Tyndall National Institute  
as Research Manager of the Photonics Packaging and Integration Group  
Supervisor Prof. Peter O'Brien  
University College Cork – Cork (Ireland)

Research Activities

## Research Projects

- 2022/Present NFFA-Europe-Pilot (H2020 Project) - Feasibility study to scale up the fabrication process of a plasmonic nanostructure via displacement Talbot lithography  
*Project Leader, Proposal Co-Author and Principal Investigator*
- 2020/2021 SPACEBEAM (H2020 Project) - Space SAR System with Integrated Photonic Beam Forming  
*Proposal Co-Author, Principal Investigator and Work Package Leader*
- 2020/2021 ACTPHAST 4.0 & 4R (H2020 Project) – Access Center for Photonics Innovation Solutions and Technology Support  
*Project Leader, Scout and Photonic Packaging and Integration Technical Supervisor*
- Leader of the Research Projects:
- Compact Integrated Portable Optical System for the Detection of Contaminants
  - ACTILABEL - Active Smart Label for Food Packaging Monitoring
- 2019/2021 PIXAPP (H2020 Project) - Photonic Integrated Circuits Assembly and Packaging Pilot Line  
*Educational Programme Manager*
- 2019/2021 EUROPRACTICE IC Service Platform through NEXTS (H2020 Project) - Training, CAD and Prototyping Services for European Universities and Research Institutes  
*Educational & Training Programme on Photonic Packaging and Integration Coordinator*
- 2019/2021 InPulse (H2020 Project) - Indium-Phosphide Pilot Line for up-scaled, low-barrier, self-sustained, PIC ecosystem  
*Work Package Leader and Photonic Packaging and Integration Technical Coordinator*
- 2019/2021 Caladan (H2020 Project) - Micro Assembled Terabit/s Capable Optical Transceivers for Datacom Applications  
*Work Package Leader*
- 2019/2021 OIP4NWE (H2020 Project) - Open-Innovation Photonics pilot for North-West Europe  
*Photonic Packaging and Integration Technical Supervisor*

## Academic Collaborations

Applied research projects strongly oriented to device optimization, prototyping and technology transfer developed with UCSD, Cornerstone and Scuola Normale Superiore Pisa

Process Design Kit  
(PDK)

Library realized in collaboration with Cornerstone, license free and open source silicon photonics for rapid prototyping foundry based in the University of Southampton (UK), to give open access to the generic process for fabrication of the apodized grating couplers structures published in *JLT* Vol. 39(15) - [DOI: 10.1109/JLT.2021.3079575](https://doi.org/10.1109/JLT.2021.3079575).  
The designs are used for research purposes in collaboration with

- ASML – Veldhoven (Netherlands)
- Beamlet Sensors – Pasadena (USA)
- Nanophotonics Group at the Zhejiang University – Zhejiang (China)

**Industrial Collaborations** R&D industrial projects covered by non-disclosure agreements (NDAs) developed with: Samsung, Boeing, Nvidia, Intel, Facebook

### Didactic Activities

- 2022/Present** **Coordinator and Lecturer** in the Lecture Course (30 hours – 2 ECTS)  
*Medical physics and radiation protection*  
for the Master's Degree in Nursing  
Department of Public Health, Experimental and Forensic Medicine - University of Pavia (Italy)
- 2021/Present** **Coordinator and Lecturer** - Lecture Course (30 hours - 3 ECTS)  
*Photonics– PIXAPP Advanced Integrated Photonic Education Programme*  
for the Master's Degree in Electrical and Electronic Engineering  
Department of Electrical and Electronic Engineering – University of Cagliari (Italy)
- 2021/Present** **Lecturer** in the Lecture Course (70 hours – 7 ECTS)  
*Optoelectronics, Diagnostic and Aerospace Applications*  
Module: Optoelectronics (20 hours)  
for the Master's Degree in Electrical and Electronic Engineering  
Department of Electrical and Electronic Engineering – University of Cagliari (Italy)
- 2021/Present** **Lecturer** in the Lecture Course (60 hours – 6 ECTS)  
*Laboratorio di Strumentazioni Fisiche*  
Module: Grating Coupler Optimization for Integrated Photonics (10 hours)  
for the Master's Degree in Physical Science  
Department of Physics - University of Pavia (Italy)
- 2021/2022** **Coordinator and Lecturer** - Lecture Course (30 hours - 3 ECTS)  
*Photonics– PIXAPP Advanced Integrated Photonic Education Programme*  
for the Master's Degree and Ph.D. in Electronics & Communication Engineering and Electrical & Electronics Engineering  
Departments of Electronics & Communication Engineering and Electrical & electronics Engineering - Nitte Meenakshi Institute of Technology (NMIT), Bangalore (India)
- 2020/2022** **Coordinator and Lecturer** - Lecture Course (30 hours - 3 ECTS)  
*Photonics Integrated Circuits Assembly and Packaging – PIXAPP Advanced Integrated Photonic Education Programme*  
for the Master's Degree and Ph.D. in Electrical, Electronic and Computer Science Engineering  
Departments of Electrical, Electronic and Computer Science Engineering - University of Cagliari (Italy)
- 2020/2022** **Lecturer** in the Lecture Course (48 hours – 5 ECTS)  
*Photonics Integrated Circuits Assembly and Packaging*  
Module: Integrated Optics and Photonics (12 hours – 2 ECTS)  
for the Master's Degree and Ph.D. in Engineering Science  
School of Electrical and Electronic Engineering – University College Cork (Ireland)
- 2020/2021** **Lecturer** in the Training Course  
*Design, Manufacturing, and Packaging of Opto-Electronic Modules*  
Module: Grating Coupler Design & Optimisation (12 hours)  
for Huawei Technologies Co. Ltd. - Shenzhen, Guangdong (China)

- 2019/2021 **Coordinator and Lecturer** - Lecture Course (30 hours - 3 ECTS)  
*Integrated Photonic Devices – PIXAPP Advanced Integrated Photonic Education Programme*  
for the Bachelor's Degree, Master's Degree and Ph.D. in Electrical, Electronic and Computer Science Engineering  
Departments of Electrical, Electronic and Computer Science Engineering - University of Cagliari (Italy)
- 2018/2020 **Coordinator and Lecturer** - Lecture Course (24 hours - 3 UCTS)  
*Integrated Photonics – PIXAPP Advanced Integrated Photonic Education Programme*  
for the Master's Degree and Ph.D. in Physics  
Department of Physics - University of Cagliari (Italy)
- 2016/17 **Tutor** in the
1. *Medical Physics Course* at Department of Medicine & Surgery
  2. *General Physics I Course* at Department of Civil Engineering
  3. *Mathematics Course* at Department of Pharmacy and Department of Medicinal Chemistry and Pharmaceutical Technology
  4. *Mathematics with Fundamentals of Statistics Course* at Department of Natural Science
  5. *High School Teachers Upgrade Course in Quantum Mechanics* at Department of Physics
  6. *Experimental Physics I Course* at Department of Chemistry
  7. *Laboratory of Physics II Course* at Department of Physics
  8. *General Physics II Course* at Department of Biomedical Engineering, Department of Mechanical Engineering and Department of Chemical Engineering  
University of Cagliari (Italy)
- Teacher** in the  
Orientation Course for High School Students at Department of Physics  
University of Cagliari (Italy)
- 2015/16 **Tutor** in the
1. *General Physics I Course* at Department of Physics and Department of Mathematics
  2. *Experimental Physics I Course* at Department of Chemistry
  3. *General Physics II Course* at Department of Biomedical Engineering
  4. *Fundamental of Structure of Matter Course* at Department of Physics
  5. *Laboratory of Physics III Course* at Department of Physics  
University of Cagliari (Italy)
- 2014/15 **Tutor** in the  
*Medical Physics Course (Harvey in English Language)* at Department of [Medicine & Surgery](#)  
University of Pavia (Italy)
- Teacher** in the  
Orientation Course for High School Students at Department of Physics  
University of Pavia (Italy)
- 2013/14 **Tutor** in the  
*General Physics Course* at Department of Pharmacology  
University of Pavia (Italy)
- Teacher** in the  
Orientation Course for High School Students at Department of Physics  
University of Pavia (Italy)

## Student Supervision

- 2022/Present** Margherita Angelini — Ph.D. Student in the Optical spectroscopies and nanostructures Group at the Department of Physics - University of Pavia (Italy)  
Thesis Title: *Plasmonic Nano-Hole Arrays for Plasmon-Enhanced Fluorescence*  
Supervisors: Prof. Franco Marabelli and Dr. Francesco Floris
- 2017/2021** Luca Zagaglia — Ph.D. Student in the Photonics Packaging and Integration Group at the Photonics Center of the Tyndall National Institute, University College Cork (Ireland)  
Thesis Title: *Optimized Grating Coupler Designs for Integrated Photonics*  
Supervisors: Prof. Peter O'Brien and Dr. Francesco Floris
- 2021** Simone Argiolas— M.Sc. Student at the Departments of Electrical, Electronic and Computer Science Engineering - University of Cagliari (Italy)  
Project Title: *Vertical assisted directional-coupler from Silicon-on-Insulator to Silicon Nitride platforms*  
Supervisors: Prof. Giovanna Mura and Dr. Francesco Floris

## Scientific Divulgence and Outreach

- Orator since 2012 at several public events both in Italy, such as the “*European Researchers’ Night*”, the “*Scientific Culture Week*”, the “*Science Festival*”, the “*Pint of Science*”, the “*PhDay*”, and in Ireland such as the “*Ireland Science Festival*”, the “*Science Week*”, the “*Cork Science Festival*”, the “*Pint of Science*” (Organizer since 2019; Theme Manager, Event Manager and Local Sponsorship Manager since 2020), the “*International Day of Light Festival*”, the “*Mad Scientist Weekend*”, the “*Irish Science Teacher Association Meeting*”, the “*Tyndall Week*”, the “*I am a Scientist stay at home*” and the “*Cork Discovers*”, through the Education & Public Engagement (EPE) Programme of the Tyndall National Institute, supported by the Irish Photonic Integration Centre (IPIC)
- Guide at the Museum of Physics of Sardinia at the Department of Physics – University of Cagliari (Italy)
- EUOPRACTICE “Advanced Packaging Series” Webinars Coordinator, Supervisor, Presenter and Speaker

**Endorsement** Training and lecturing endorsement from Lumerical

Entrepreneurial Activities

- 2022** UniVenture 2022 by UniPV for competing startups and entrepreneurs – Plasmore srl Project *Project Leader*  
(First Place Award)

Lifelong Learning Activities

- International Schools**
- [3] International Training School on Nanoparticles: NANOFACETS  
**2022** Novi Sad (Serbia)  
(Invited Speaker and Trainer)
- [2] International Summer School on Nanomedicine: ISSON14  
**2014** Thessaloniki (Greece)  
(Contributed talk)
- [1] International Summer School on Plasmonics: Plasmonics<sup>#3</sup>  
**2013** Cargèse (France)  
(Contributed talk)

## Certificates and Badges

- 2021 • Certificate – Nature Masterclasses Online Course in Focus on Peer Review  
All-virtual, web course by Springer Nature
- 2020 • Certificate – Nature Masterclasses Online Course in Scientific Writing and Publishing
  - Part 1: Writing a research paper
  - Part 2: Publishing a research paper
  - Part 3: Writing and publishing a review paper
 All-virtual, web course by Springer Nature
- Certificate – Publons Academy Practical Peer Review Course  
All-virtual, web course by Publons
- Certificate – Certificate of Service as Reviewer Board Member by MDPI
- Certificate – Epigeum Online Course “Research Integrity” by Oxford University Press
- Digital Badge in “LabVIEW Programming Fundamentals” by National Instruments
- 2019 • Certificate of completion for CPD1678 “RSS Research Skills Training Programme”  
University College Cork – Cork (Ireland)
- Certificate of completion for “The UCC Post Doc Development Hub Training”  
University College Cork – Cork (Ireland)
- Digital Badge in “Universal Design for Learning”  
University College Cork – Cork (Ireland)
- 2018 Digital Badge in “Postgraduate Research Supervision”  
University College Cork – Cork (Ireland)

## Development Activities and Professional Training Courses

- Nocturno Project Training Program 2022:
  - Scientific Challenges in Agriculture
  - Communication Skills and Soft Skills for Scientists**2022** All-virtual, web training course provided by the BioSense Institute - Novi Sad (Serbia)
- National Digital Research Centre (NDRC):  
Pre-Commercialization Training Course  
**2020** All-virtual, web training course
- UCC Online Sessions for Research Staff Programme 2020:
  - Transition to a Leadership Role & Different Leadership Styles
  - Career Planning for you & Listening to your Team
  - Managing a Research Team
  - How to Prepare a Non-Academic CV
  - Planning for a Career Beyond Academia?
  - Interview Skills
  - Mentoring
  - Commercial Awareness and Knowledge Transfer**2020** University College Cork - Cork (Ireland)
- UCC Research Skills Training Programme 2019:
  - Finding Funding - Navigating the Funding Landscape
  - Applying for funding – Panel discussion with evaluators

- Proposal Writing and Costing Workshop - Panel discussion with successful applicants
  - Dissemination and Outreach
  - Maximising the Impact of your Research through Commercial Exploitation
  - F.A.I.R. Data Management
  - Maximising and Measuring Citation Performance

**2019** University College Cork - Cork (Ireland)
- Hyperion LTD. Training Course:  
How to Write a Competitive Proposal for Horizon 2020  
**2019** University College Cork - Cork (Ireland)
- Tyndall Trainings:
  - Courses 2019
    - Negotiation & Influencing Skills
    - Unconscious Bias
    - Risk Assessment

**2019** Tyndall National Institute - Cork (Ireland)
  - Courses 2018
    - Horizon 2020 Training:
      - Part 1/3 - Introduction to the Suite of EU Programmes
      - Part 2/3 - An introductory course for Proposal Writing for H2020
      - Part 3/3 - An advanced course on Proposal Writing for H2020
    - Conducting Effective Meetings
    - Time Management & Personal Effectiveness
    - Effective Networking
    - LinkedIn - Build your own LinkedIn profile

**2018** Tyndall National Institute - Cork (Ireland)
- UCC Post-Doc Development Hub Training Courses 2018:
  - Grant and Scientific Writing
  - Communication and Presentation Skills
  - Teaching and Learning Skills
  - Commercial Awareness and Knowledge Transfer
  - Innovation and Entrepreneurship
  - Developing and Consolidating Your Research Career
  - Statistics for Research
  - Leading a Research Team
  - Communicating Your Research
  - Managing Yourself Through Change
  - Funding Your Research
  - Project Management Skills

**2018** University College Cork - Cork (Ireland)
- Science Foundation Ireland (SFI) Training Course:  
Communication & Public Engagement Training  
**2018** Tyndall National Institute - Cork (Ireland)

[Conferences, Meetings and Workshops](#)

- [33] *Conference* PRIME 2022  
**2022** Villasimius (Italy)  
(Invited talk)
- [32] *Conference* IONS 2021  
**2021** All-virtual, web conference format  
(Contributed talk)



- [31] *Workshop* Enterprise Ireland:  
"Innovation Commercialisation"  
**2021** All-virtual, web workshop provided by the New Venture Office of University College Cork - Cork (Ireland)
- [30] *Workshop* European Commission:  
"How to prepare a successful proposal in Horizon Europe"  
**2021** All-virtual, web workshop provided by the Directorate-General for Research & Innovation of the European Commission
- [29] *Workshop* Tyndall National Institute:  
"Managing My Workplace Stress"  
**2021** All-virtual, web workshop provided by Beckinridge
- [28] *Workshop* Human Resources and Research Support Service - University College Cork:  
"Video Production and Training Workshop"  
**2020** All-virtual, web workshop provided by The Vidacademy
- [27] *Workshop* Tyndall National Institute:  
"Social Media Workshop (Intro + Advanced)"  
**2020** University College Cork - Cork (Ireland)
- [26] *Workshop* Human Resources and Research Support Service - University College Cork:  
"Getting Ready for Horizon Europe"  
**2020** University College Cork - Cork (Ireland)
- [25] *Conference* 2020 Conference on Lasers and Electro-Optics ("CLEO")  
**2020** All-virtual, web conference format
- [24] *Workshop* Irish Photonic Integration Centre (IPIC):  
"IPIC 2020 Industry Workshop"  
**2020** University College Cork - Cork (Ireland)
- [23] *Workshop* Enterprise Ireland:  
"Stimulating Industry-Academic Innovation"  
**2019** Tyndall National Institute - Cork (Ireland)
- [22] *Workshop* PIXAPP:  
"Photonic Integrated Circuit Manufacturing"  
**2019** ECOC – Dublin (Ireland)
- [21] *Workshop* Sense about Science:  
"Standing Up for Science EU"  
**2019** University College Cork - Cork (Ireland)
- [20] *Conference* PIERS2019  
Organizer and Chairman of the Special Session  
Photonics Packaging & Integration 1 and 2  
**2019** University of Rome "La Sapienza" – Rome (Italy)
- [19] *Workshop* Dean of Graduate Studies - University College Cork:  
"Communicating the impact of your research"  
**2019** University College Cork - Cork (Ireland)
- [18] *Workshop* Dean of Graduate Studies - University College Cork:  
"Masterclass: Research Supervision"  
**2019** University College Cork - Cork (Ireland)

- [17] *Workshop* Irish MSCA Office - Irish Universities Association (IUA):  
"MSCA Individual Fellowship"  
**2019** Irish Universities Association (IUA) - Dublin (Ireland)
- [16] *Workshop* Campus Engage Team -  
Irish Universities Association (IUA) and Science Foundation Ireland (SFI):  
"Engaged Research Training"  
**2019** University College Cork - Cork (Ireland)
- [15] *Conference* Human Resources and Research Support Service -  
University College Cork:  
"Human Resources Researcher Conference 2018 - The Politics of Research"  
**2018** University College Cork - Cork (Ireland)
- [14] *Workshop* Dean of Graduate Studies - University College Cork:  
"Viva Voce Supervisor Training for Academic and Research Staff"  
**2018** University College Cork - Cork (Ireland)
- [13] *Workshop* Dean of Graduate Studies - University College Cork:  
"Ph.D. Supervisor Training"  
**2018** University College Cork - Cork (Ireland)
- [12] *Workshop* Erc=science<sup>2</sup>:  
"Science Communication Through Storytelling and Humor"  
**2018** University College Cork - Cork (Ireland)
- [11] *Workshop* COMSOL Workshop at Tyndall:  
"Introduction to COMSOL 5.3 & Application Builder"  
**2017** Tyndall National Institute - Cork (Ireland)
- [10] *Workshop* Elsevier Author Workshop:  
"How to publish a scientific work"  
**2017** University of Cagliari - Cagliari (Italy)
- [9] *Meeting* 13<sup>th</sup> ETSF Young Researchers' Meeting  
**2016** King's College - London (UK)  
(Poster presentation)
- [8] *Workshop* BU Materials Day 2015 - Nanomaterials in Medicine:  
Improving Healthcare Through SMALL Innovations  
**2015** Boston University - Boston (USA)
- [7] *Conference* Surface Plasmon and Plasmonics SPP2015  
**2015** Santa Margherita Ligure (Italy)  
(Poster presentations – Funded by a DAAD Scholarship for Conferences)
- [6] *Workshop* Communicating Science  
**2014** SISSA - Trieste (Italy)
- [5] *Meeting* 5<sup>th</sup> Young Research Meeting  
**2014** SISSA - Trieste (Italy)  
(Contributed talk)
- [4] *Conference* Nanotechnology 2014 NN14  
**2014** Thessaloniki (Greece)  
(Contributed talk)

- [3] *Conference* 2013 MRS Fall Meeting & Exhibit  
**2013** Boston (USA)  
(Poster presentation and contributed talks)
- [2] *Conference* FisMat 2013  
**2013** Polytechnic of Milan (Italy)  
(Poster presentations and contributed talk)
- [1] *Workshop* Plasmonica 2013  
**2013** Polytechnic of Milan (Italy)  
(Poster presentations)

#### Affiliations and Memberships

- Member of the B.Sc. and M. Sc. Graduate Commissions at the Physics Department of the University of Pavia
- Irish Photonic Integration Centre (IPIC) Fellow
- Tyndall's Early Career Researcher Network (ECRN) Board Member
- Young European Associated Researchers (YEAR) Network - Tyndall's Board Member

#### Awards, Grants and Acknowledgements

- EPE Demo of the Year Award  
@ *IPIC 2020 Industry Workshop* - **2020** Cork (Ireland)
- DAAD Scholarship for Conference Grants  
@ *SPP2015 Conference* – **2015** Santa Margherita Ligure (Italy)
- Scholarship funded by the Italian Minister of the Instruction, University and Research through the “Pavia-Boston Exchange Project” Award for a six-months exchange period at the Boston University in Boston, Massachusetts (USA)  
@ *University of Pavia* – **2015** Pavia (Italy)

## PERSONAL SKILLS

Mother Tongue

**Italian**

Other Language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
<b>English</b>	C2	C2	C2	C2	C2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

High level language skills acquired:

- taking part in several courses at the Centro Linguistico di Ateneo (CLA) of the University of Cagliari in the environment of the project called “Sardegna Speaks English” sponsored by Regione Autonoma della Sardegna – Cagliari (Italy);
- during a six-months exchange period at the Boston University – Boston, Massachusetts (USA);
- working as a Post-Doctoral Research Fellow at the Photonics Center of the Tyndall National Institute - University College Cork - Cork (Ireland) since July 2017 till December 2021.

## SCIENTIFIC PRODUCTION

## Journal Papers

- [22] Refractive Index Dependence of Fluorescence Enhancement in a Nanostructured Plasmonic Grating  
M. Angelini, E. Manobianco, P. Pellacani, F. Floris and F. Marabelli  
*Materials* Volume 16, Pages 1289-1/11  
**February 2023**  
[DOI: 10.3390/ma16031289](https://doi.org/10.3390/ma16031289)
- [21] Plasmonic Modes and Fluorescence Enhancement Coupling Mechanism: A Case with a Nanostructured Grating  
M. Angelini, E. Manobianco, P. Pellacani, F. Floris and F. Marabelli  
*Nanomaterials* Volume 12, Pages 4339-1/16  
**December 2022**  
[DOI: 10.3390/nano12234339](https://doi.org/10.3390/nano12234339)
- [20] Particle Swarm Optimization of GaAs-AlGaAs Nanowire Photonic Crystals as Two-Dimensional Diffraction Gratings for Light Trapping  
L. Zagaglia, V. Demontis, F. Rossella and F. Floris  
*Nano Express* Volume 3, Pages 021001-1/6  
**April 2022**  
[DOI: 10.1088/2632-959X/ac61ec](https://doi.org/10.1088/2632-959X/ac61ec)
- [19] Wavelength Selection in Focusing Non-Uniform Grating Couplers: a Coupling Efficiency Curve Asymmetry and Bandwidth Analysis  
L. Zagaglia, F. Floris and P. O'Brien  
*Photonics and Nanostructures* Volume 50, Pages 101019-1/6  
**March 2022**  
[DOI: 10.1016/j.photonics.2022.101019](https://doi.org/10.1016/j.photonics.2022.101019)
- [18] Design and Performance Estimation of a Photonic Integrated Beamforming Receiver for Scan-On-Receive Synthetic Aperture Radar  
M. Reza, G. Serafino, T. Otto, A. Mohammad, H. Mohammadhosseini, L. Shiramini, F. Floris, M. Kolb, D. Bale, S. Gabrielli, C. Roeloffzen, P. van Dijk, A. Abbasi, B. Desoete and P. Ghelfi  
*Journal of Lightwave Technology* Volume 39(24), Pages 7588-7599  
**October 2021**  
[DOI: 10.1109/JLT.2021.3119225](https://doi.org/10.1109/JLT.2021.3119225)
- [17] Experimental Characterization of Particle Swarm Optimized Focusing Non-Uniform Grating Coupler for Multiple SOI Thicknesses  
L. Zagaglia, F. Floris and P. O'Brien  
*Journal of Lightwave Technology* Volume 39(15), Pages 5028-5034  
**August 2021**  
[DOI: 10.1109/JLT.2021.3079575](https://doi.org/10.1109/JLT.2021.3079575)
- [16] A Non-Mechanical Multi-Wavelength Integrated Photonic Beam Steering System  
N. Alshamrani, A. Grieco, A. Friedman, K. Johnson, M. Kim, F. Floris, P. O'Brien, and Y. Fainman  
*Journal of Lightwave Technology* Volume 39(12), Pages 4201-4208

**June 2021**

[DOI: 10.1109/JLT.2020.3034580](https://doi.org/10.1109/JLT.2020.3034580)

- [15] Semiconductor nanowire arrays for optical sensing: a numerical insight on the impact of array periodicity and density

L. Zagaglia, V. Demontis, F. Rossella and F. Floris

*Nanotechnology* Volume 32(33), Pages 335502-1/12

**May 2021**

[DOI: 10.1088/1361-6528/abff8b](https://doi.org/10.1088/1361-6528/abff8b)

- [14] CORNERSTONE's Silicon Photonics Rapid Prototyping Platforms: Current Status and Future Outlook

C. G. Littlejohns, D. J. Rowe, H. Du, K. Li, W. Zhang, W. Cao, T. Dominguez Bucio, X. Yan, M. Banakar, D. Tran, S. Liu, F. Meng, B. Chen, Y. Qi, X. Chen, M. Nedeljkovic, L. Mastronardi, R. Maharjan, S. Bohora, A. Dhaka, I. Crowe, A. Khurana, K. C. Balram, L. Zagaglia, F. Floris, P. O'Brien, E. Di Gaetano, H. Chong, F. Y. Gardes, D. J. Thomson, G. Z. Mashanovich, M. Sore and G. T. Reed

*Applied Science* Volume 10(22), Pages 08201-1/34

**November 2020**

[DOI: 10.3390/app10228201](https://doi.org/10.3390/app10228201)

- [13] Fluorescence Spectroscopy Study of Protoporphyrin IX in Optical Tissue Simulating Liquid Phantoms

H. Lu, F. Floris, M. Rensing and S. Andersson-Engels

*Materials* Volume 13, Pages: 2105-1/10

**May 2020**

[DOI: 10.3390/ma13092105](https://doi.org/10.3390/ma13092105)

- [12] Una proposta di Laboratorio di Meccanica Quantistica per le Scuole Secondarie Superiori

C. M. Carbonaro, V. Fanti, F. Floris, M.B. Maccioni and A. Zurru

*Le Scuole di Storia della Fisica* Quaderno 28 – La Fisica nella Scuola

**March 2020**

[ISSN: 1120-6527](https://doi.org/10.3390/ma12213572)

- [11] Strong Modulations of Optical Reflectance in Tapered Core–Shell Nanowires

F. Floris, L. Fornasari, A. Marini, V. Bellani, F. Banfi, S. Roddaro, D. Ercolani, M. Rocci, F. Beltram, M. Cecchini, L. Sorba and F. Rossella

*Materials* Volume 12, Pages: 3572-1/11

**October 2019**

[DOI: 10.3390/ma12213572](https://doi.org/10.3390/ma12213572)

- [10] Comparing Laser Hybrid-Integration and Fiber Coupling with Standard Grating Couplers on Si-PICs

L. Zagaglia, F. Floris, L. Carroll and P. O'Brian

*IEEE Photonics Technology Letters* Volume 31, Pages: 66-69

**November 2018**

[DOI: 10.1109/LPT.2018.2883211](https://doi.org/10.1109/LPT.2018.2883211)

- [9] Co-optimizing grating couplers for hybrid integration of InP and SOI photonic platforms

M. Passoni, F. Floris, H.Y. Hwang, L. Zagaglia, L. Carroll, L.C. Andreani and P. O'Brian

- AIP Advances* Volume 8, Pages: 095109-1/8  
**September 2018**  
[DOI: 10.1063/1.5046164](https://doi.org/10.1063/1.5046164)
- [8] Self-Assembled InAs Nanowires as Optical Reflectors  
F. Floris, L. Fornasari, A. Marini, V. Bellani, F. Banfi, S. Roddaro, D. Ercolani, M. Rocci, F. Beltram, M. Cecchini, L. Sorba and F. Rossella  
*Nanomaterials* Volume 7, Pages: 400-410  
**November 2017**  
[DOI: 10.3390/nano7110400](https://doi.org/10.3390/nano7110400)
- [7] Photo-induced absorption spectra of a poly(*p*-phenylenevinylene) polymer with fluorinated double bonds  
M. Burger, F. Floris, A. Cardone, G.M. Farinola, V. Morandi, F. Marabelli and D. Comoretto  
*Organic Electronics* Volume 43, Pages: 214-221  
**January 2017**  
[DOI: 10.1016/j.orgel.2017.01.023](https://doi.org/10.1016/j.orgel.2017.01.023)
- [6] Demonstration of Fluorescence Enhancement via Bloch Surface Waves in All-Polymer Multilayer Structures  
L. Fornasari, F. Floris, M. Patrini, D. Comoretto and F. Marabelli  
*Physical Chemistry Chemical Physics* Volume 18, Pages: 14086-14093  
**April 2016**  
[DOI: 10.1039/c5cp07660a](https://doi.org/10.1039/c5cp07660a)
- [5] Synergic Combination of the Sol-gel Method with Dip-coating for Plasmonic Devices  
C. Figus, M. Patrini, F. Floris, L. Fornasari, P. Pellacani, G. Marchesini, A. Valsesia, F. Artizzu, D. Marongiu, M. Saba, F. Marabelli, A. Mura, G. Bongiovanni and F. Quochi  
*Beilstein Journal of Nanotechnology* Volume 6, Pages: 500-507  
**February 2015**  
[DOI: 10.3762/bjnano.6.52](https://doi.org/10.3762/bjnano.6.52)
- [4] Thermal Evolution of Tetramethylammonium Tetrafluoroborate and Perchlorate Investigated through Dielectric and IR Spectroscopy  
G.B. Parravicini, F. Marabelli, F. Floris, V. Pasquali, J. Parravicini and P. Ferloni  
*Materials Chemistry and Physics* Volume 147, Pages:120–126  
**September 2014**  
[DOI: 10.1016/j.matchemphys.2014.04.018](https://doi.org/10.1016/j.matchemphys.2014.04.018)
- [3] Optical Sensitivity Gain in Silica-coated Plasmonic Nanostructures  
F. Floris, C. Figus, L. Fornasari, M. Patrini, P. Pellacani, G. Marchesini, A. Valsesia, F. Artizzu, D. Marongiu, M. Saba, A. Mura, G. Bongiovanni, F. Marabelli and F. Quochi  
*The Journal of Physical Chemistry Letters* Volume 5, Pages:2935–2940  
**August 2014**  
[DOI: 10.1021/jz501443c](https://doi.org/10.1021/jz501443c)
- [2] Fluorescence Excitation Enhancement by Bloch Surface Wave in All-polymer One-dimensional Photonic Structure

L. Fornasari, [F. Floris](#), M. Patrini, G. Canazza, G. Guizzetti, D. Comoretto and F. Marabelli

*Applied Physics Letters* Volume 105, Pages: 0533031-0533035

**August 2014**

[DOI: 10.1063/1.4892423](#)

- [1] Extending the Lasing Wavelength Coverage of Organic Semiconductor Nanofibers by Periodic Organic–Organic Heteroepitaxy
- F. Quochi, G. Schwabegger, C. Simbrunner, [F. Floris](#), M. Saba, A. Mura, H. Sitter and G. Bongiovanni
- Advanced Optical Materials* Volume 1, Pages:117–122
- February 2013**
- [DOI: 10.1002/adom.201200005](#)

#### Journal Covers

- [1] Organic Nanofibers: Extending the Lasing Wavelength Coverage of Organic Semiconductor Nanofibers by Periodic Organic–Organic Heteroepitaxy
- F. Quochi, G. Schwabegger, C. Simbrunner, [F. Floris](#), M. Saba, A. Mura, H. Sitter and G. Bongiovanni
- Advanced Optical Materials* Volume 1, Page:116
- February 2013**
- [DOI: 10.1002/adom.201370015](#)

#### Conference Papers

- [14] Modelling of a Plasmonic Metasurface for Optical Sensing Applications by a Custom Particle Swarm Optimization Algorithm Implemented in the FDTD Method
- M. Angelini, L. Zagaglia, F. Marabelli and [F. Floris](#)
- IEEE Xplore* 2022 Sixteenth International Congress on Artificial Materials for Novel Wave Phenomena (METAMATERIALS 2022)
- September 2022**
- [DOI: 10.1109/Metamaterials54993.2022.9920774](#)
- [13] A Case of Plasmonic Nanostructure for Plasmon-Enhanced Fluorescence
- M. Angelini, E. Manobianco, P. Pellacani, [F. Floris](#) and F. Marabelli
- IEEE Xplore* 2022 Sixteenth International Congress on Artificial Materials for Novel Wave Phenomena (METAMATERIALS 2022)
- September 2022**
- [DOI: 10.1109/Metamaterials54993.2022.9920780](#)
- [12] Microwave Photonics Beamformer for Spaceborne SAR
- T. Otto, S. Gabrielli, P. Ghelfi, G. Serafino, M. Reza, A. Mohammad, C. Roeloffzen, P. Van Dijk, H. Mohammadhosseini, D. Saladukha, [F. Floris](#) and R. Roggan
- IEEE Xplore* European Conference on Synthetic Aperture Radar, EUSAR 2022
- July 2022**
- [ISBN: 978-3-8007-5823-4](#)
- [11] Vertical assisted directional-coupler from Silicon-on-Insulator to Silicon Nitride platforms
- L. Zagaglia, S. Argiolas, S. Iadanza, G. Mura, [F. Floris](#) and P. O'Brien
- META 2021 Warsaw – Poland Proceeding*
- September 2021**

[ISSN: 2429-1390](#)

- [10] Advancement of Photonic Integration Technology for Space Applications: a X-band Scan-on-Receive Synthetic Aperture Radar Receiver with Electro-Photonic Beamforming and Frequency Down-Conversion Capability  
H. Mohammadhoseini, P. Ghelfi, B. Desoete, S. Gabrielli, T. Otto, A. W. Mohammad, C. Roeloffzen, P. Van Dijk, M. Reza, G. Serafino and [F. Floris](#)  
*Proceeding of SPIE* Volume11852, 118522W(1-8)  
**June 2021**  
[DOI: 0.1117/12.2601247](#)
- [9] Engineering the optical reflectance of randomly arranged self-assembled semiconductor nanowires  
V. Demontis, A. Marini, [F. Floris](#), L. Sorba and F. Rossella  
*AIP Conference Proceeding* Volume2257, 1  
**September 2020**  
[DOI: 10.1063/5.0023675](#)
- [8] Analysis in reciprocal space of the band-pass filter effect in uniform and non-uniform grating couplers  
L. Zagaglia, [F. Floris](#) and P. O'Brien  
*IOP Journal of Physics: Conference Series* Volume1548, 012031  
**May 2020**  
[DOI: 10.1088/1742-6596/1548/1/012031](#)
- [7] Optimized Design Procedure for Low-cost Grating-couplers in Photonics-packaging  
L. Zagaglia, [F. Floris](#) and P. O'Brien  
*IEEE Xplore* 2019 PIERS Symposium - Spring, pp. 234-241  
**March 2020**  
[DOI: 10.1109/PIERS-Spring46901.2019.9017442](#)
- [6] Fluorescence spectroscopy study of protoporphyrin IX in tissue-like phantoms  
H. Lu, [F. Floris](#), M. Rensing and S. Andersson-Engels  
*Proceeding of SPIE* Volume11190, 111901S(1-8)  
**November 2019**  
[DOI: 10.1117/12.2537000](#)
- [5] A Multiplexed Label Free Plasmonic Nano-device for Near Infrared Applications  
[F. Floris](#), L. Fornasari, A. Frangolho, S. Giudicatti, G. Marchesini, P. Pellacani, A. Valsesia and F. Marabelli  
*AIP Conference Proceeding* Volume1646, 46  
**February 2015**  
[DOI: 10.1063/1.4908581](#)
- [4] Plasmonic Structures for Sensing and Emitting Devices  
[F. Floris](#), L. Fornasari, M. Patrini, C. Figus, A. Mura, G. Bongiovanni, F. Quochi, P. Pellacani, A. Valsesia and F. Marabelli  
*IOP Journal of Physics: Conference Series* Volume566, 012015  
**December 2014**  
[DOI: 10.1088/1742-6596/566/1/012015](#)



- [3] Thickness Controlled Sol-gel Silica Films for Plasmonic Bio-sensing Devices  
C. Figus, F. Quochi, F. Artizzu, M. Saba, D. Marongiu, F. Floris, F. Marabelli, M. Patrini, L. Fornasari, P. Pellacani, A. Valsesia, A. Mura and G. Bongiovanni  
*AIP Conference Proceeding* Volume1624, 43  
**October 2014**  
[DOI: 10.1063/1.4900455](https://doi.org/10.1063/1.4900455)
- [2] Multiband Laser Action from Organic-Organic Heteroepitaxial Nanofibers  
F. Quochi, G. Schwabegger, C. Simbrunner, F. Floris, M. Saba, A. Mura, H. Sitter and G. Bongiovanni  
*MRS Proceeding* Volume1632, Symposium Q  
**February 2014**  
[DOI: 10.1557/opl.2014.115](https://doi.org/10.1557/opl.2014.115)
- [1] Plasmonic Structures for Near Infrared Applications  
F. Floris, F. Marabelli, M. Patrini, L. Fornasari, F. Quochi, C. Figus, G. Bongiovanni, A. Mura, M. Saba, P. Pellacani and A. Valsesia  
*MRS Proceeding* Volume1629, Symposium N  
**January 2014**  
[DOI: 10.1557/opl.2014.80](https://doi.org/10.1557/opl.2014.80)
- Conference Session [1] Organizer and Chairman of the Special Session  
*Photonics Packaging & Integration 1 and 2* at the PIERS2019 Conference  
**2019** University of Rome "La Sapienza" – Rome (Italy)
- Talks [26] Introduction to Co-Packaged Opto-Electronic Design  
[17<sup>th</sup> International Conference PRIME 2022 – **2022** Villasimius (Italy)]  
(Invited Speaker)
- [25] Gold nanohole arrays: from structural optimization to biosensing applications  
[International School of Physics "Enrico Fermi" – **2022** Varenna (Italy)]  
(winner of the Best Oral Presentation Award)
- [24] Workshop: Bio-chemical analyzer based on imaging surface plasmon resonance  
[International Training School on Nanoparticles: NANOFACETS – **2022** Novi Sad (Serbia)]  
(Invited Hands-on Trainer)
- [23] Multiplexing detection of biomarkers through SPR imaging and kinetics analysis  
[International Training School on Nanoparticles: NANOFACETS – **2022** Novi Sad (Serbia)]  
(Invited Speaker)
- [22] Microwave Photonics Beamformer for Spaceborne SAR  
[EUSAR 2022 – **2022** Leipzig (Germany)]
- [21] SPACEBEAM optical beamformer for SAR – A potential enabler for the SKADI mission  
[7th Workshop on RF and Microwave Systems, Instruments & Sub-systems + 5th Ka-band Workshop – **2022** ESA-ESTEC, Noordwijk (Netherlands)]
- [20] Semiconductor nanowire arrays for optical sensing: a numerical insight on the Impact of periodicity and density  
[IONS Ireland 2021 – **2021** University College Cork, Cork (Ireland)]

- All-virtual, web conference format]  
(Presenting Author)
- [19] Experimental characterization of particle swarm optimized focusing non-uniform grating couplers  
[IONS Ireland 2021 – 2021 University College Cork, Cork (Ireland)  
All-virtual, web conference format]  
(winner of the Best Oral Presentation Award)
- [18] Optimization of a silicon-to-silicon nitride vertical coupler  
[IONS Ireland 2021 – 2021 University College Cork, Cork (Ireland)  
All-virtual, web conference format]
- [17] Vertical assisted directional-coupler from Silicon-on-Insulator to Silicon Nitride platforms  
[META 2021 – 2021 University of Warsaw, Warsaw (Poland)  
All-virtual, web conference format]
- [16] Advancement of Photonic Integration Technology for Space Applications: a X-band Scan-on-Receive Synthetic Aperture Radar Receiver with Electro-Photonic Beamforming and Frequency Down-Conversion Capability  
[ICSO 2020 – 2021 All-virtual, web conference format]
- [15] Anomalous effective permittivity of Vogel spiral metamaterials  
[PLASMONICA 2019 – 2019 Naples (Italy)]
- [14] Analysis in reciprocal space of the band-pass filter effect in uniform and non-uniform grating couplers  
[10<sup>th</sup> Young Research Meeting – 2019 University of Rome “Tor Vergata” - Rome (Italy)]
- [13] The Integrated Photonics Education Kit  
[PIERS2019 – 2019 University of Rome “La Sapienza” - Rome (Italy)]
- [12] Optimized Design Procedure for Low-cost Grating couplers in Photonics-packaging  
[PIERS2019 – 2019 University of Rome “La Sapienza” - Rome (Italy)]
- [11] Pluggable Free-space Connectors Enabling Consumable Photonics  
[PIERS2019 – 2019 University of Rome “La Sapienza” - Rome (Italy)]
- [10] Wafer-level Packaging of Photonics and Electronics for Terabit-scale Optical Interconnects  
[PIERS2019 – 2019 University of Rome “La Sapienza” - Rome (Italy)]
- [9] From Pluggable Freespace Connectors to Consumable Photonics Sensors  
[Photonics Ireland 2018 – 2018 Cork (Ireland)]
- [8] Spectral redistribution of fluorescence intensity in all-polymer microcavities and distributed Bragg reflectors  
[GISR2016 – 2016 Padova (Italy)]
- [7] A Plasmonic Structure for Emitting and Sensing Devices  
[5<sup>th</sup> Young Research Meeting – 2014 SISSA – Trieste (Italy)]  
(Presenting Author)
- [6] A Plasmonic Nano-Device for Near Infrared Applications  
[2014 Nanotechnology NN14 Conference – 2014 Thessaloniki (Greece)]  
(Presenting Author)

- [5] Multiband Laser Action from Organic-Organic Heteroepitaxial Nanofibers  
[2013 MRS Fall Meeting & Exhibit – 2013 Boston (USA)]  
(Presenting Author)
- [4] Plasmonic Structures Coupled to Rare-Earth Fluorophores for Near Infrared Applications  
[2013 MRS Fall Meeting & Exhibit – 2013 Boston (USA)]  
(Presenting Author)
- [3] Quantum Dot Infrared Photodetectors Integrated on Si  
[EOS 2013 Topical Meetings – 2013 Capri (Italy)]
- [2] Multilayer Structures,  $\pi$ -conjugated Polymers and Optical Detection of Nitro-aromatic Compounds  
[FisMat 2013 – 2013 Milan (Italy)]  
(Presenting Author)
- [1] Plasmonic Structures for Near Infrared Applications  
[Summer School on Plasmonics<sup>#3</sup> – 2013 Cargèse (France)]  
(Presenting Author)

#### Posters

- [29] Modelling of a Plasmonic Metasurface for Optical Sensing Applications by a Custom Particle Swarm Optimization Algorithm Implemented in the FDTD Method  
[METAMATERIALS 2022 – 2022 Siena (Italy)]
- [28] A Case of Plasmonic Nanostructure for Plasmon-Enhanced Fluorescence  
[METAMATERIALS 2022 – 2022 Siena (Italy)]
- [27] Compact Integrated Portable Optical System for the Detection of Contaminants  
[IONS Ireland 2021 – 2021 University College Cork, Cork (Ireland)]  
All-virtual, web conference format]
- [26] Optimized focusing non-uniform grating couplers for the horizontal fiber light coupling scheme  
[IPIC 2021 Industry Workshop – 2021 All-virtual, web workshop  
and  
Photonics Ireland 2021 – 2021 Cork (Ireland)]
- [25] The Integrated Photonics Education Kit (IPEK) – Promoting integrated photonics as emerging technology to the next generation of college students  
[OFC 2020 – 2020 San Diego (USA)]
- [24] Micro-lens for Relaxed Alignment-tolerances in Photonics Packaging  
[IPIC 2020 Industry Workshop - 2020 Cork (Ireland)]
- [23] Heat Dissipation Through Copper Thermal Vias in Glass interposers for Packaging of Integrated Electronic/ Photonic Devices  
[IPIC 2020 Industry Workshop - 2020 Cork (Ireland)]
- [22] Fluorescence Spectroscopy Study of Protoporphyrin IX in Tissue-like Phantoms  
[Photonics Asia 2019 Conference - 2019 Hangzhou (China)]
- [21] Self-Assembled InAs Nanowires as Optical Reflectors  
[Nanowire Week 2019 Conference - 2019 Pisa (Italy)]
- [20] Tailoring of a Particle Swarm Optimization Procedure for Grating-coupler Design  
[ePIXfab Silicon Photonics Summer School - 2019 Pisa (Italy)]

- [19] Photonic Chip Interconnects: PIC-to-PIC Grating Coupling  
[*IPIC 2019 Industry Workshop* - **2019** Cork (Ireland)]
- [18] Optimized Grating Design  
[*IPIC 2019 Industry Workshop* - **2019** Cork (Ireland)]  
(winner of the Best Poster Award)
- [17] Integrated CMOS-Manufacturable Fourier Transform Spectrometer  
[*SUPT/SSPhF 2019* – **2019** Davis (USA)]
- [16] The Integrated Photonics Education Kit  
[*OFC 2019* – **2019** San Diego (USA)]
- [15] Co-optimizing grating couplers for hybrid integration of InP and SOI photonic platforms  
[*Photonics Ireland 2018* – **2018** Cork (Ireland)]
- [14] Comparing Laser-Hybrid Integration and Direct Fiber-Coupling on Si-PICs  
[*Photonics Ireland 2018* – **2018** Cork (Ireland)]
- [13] Photophysical Properties of a Fluorinated Poly(p-phenylenevinylene) Derivative  
[*ETSF YRM 2016* – **2016** King's College - London (UK)]  
(Presenting Author)
- [12] Characterization of Hybrid Systems of Plasmonic Nanoantennas Coupled to Porous Silicon Multilayers  
[*PSST 2016* – **2016** Tarragona (Spain)]
- [11] Wine Traceability by Species and Quantification of Lanthanides Atoms  
[*IVAS 2015* – **2015** Trento (Italy)]
- [10] Silica Coated Plasmonic Nanosurfaces for Photoluminescence Enhancement  
[*PLASMONICA 2015* – **2015** Padova (Italy)]  
(Presenting Author)
- [9] Hybrid Plasmonic-Photonic Nanostructure: Noble-Metal Nanocrescents over Self-Ordered Monolayer of Fluorescence Microspheres  
[*PLASMONICA 2015* – **2015** Padova (Italy)]
- [8] Silica Coated Plasmonic Nanosurfaces for Biosensing and Light Emission Applications  
[*SPP2015* – **2015** Santa Margherita Ligure (Italy)]  
(Presenting Author)
- [7] Hybrid Plasmonic-Photonic Application-Oriented Platform  
[*SPP2015* – **2015** Santa Margherita Ligure (Italy)]
- [6] Thickness Controlled Sol-Gel Silica Films for Plasmonic Device: A Synergic Combination for Bio-Sensing  
[*2014 Symposium SiO<sub>2</sub>, Advanced Dielectrics and Related Devices* – **2014** Cagliari (Italy)]
- [5] Organic Flexible Photonic Structures for Amplified Light Emission  
[*EOSAM2014* – **2014** Berlin (Germany)]  
and  
[*2013 MRS Fall Meeting & Exhibit* – **2013** Boston (USA)]

- [4] Extending the Lasing Wavelength Coverage of Periodically Grown Semiconductor Nanofibers by Organic-Organic Heteroepitaxy  
[*FisMat 2013 – 2013* Milan (Italy)]  
(Presenting Author)
- [3] Plasmonic Structures For Near Infrared Applications  
[*FisMat 2013 – 2013* Milan (Italy)]  
(Presenting Author)
- [2] Plasmonic Structures and Interaction with Fluorophores for Near Infrared Applications  
[*Plasmonica 2013 – 2013* Milan (Italy)]  
(Presenting Author)
- [1] Lasing Performance of Organic Heteroepitaxial Nanofibers Realized by Periodic Deposition of Para-Sexiphenyl and Sexithiophene on Muscovite Mica  
[*EXCON 2012 – 2012* Groningen (Netherlands)]

#### Referee Activities

MDPI – Optics  
MDPI – Nanomaterials  
MDPI – Symmetry [*Reviewer Board Component*]  
MDPI – Mathematics  
MDPI – Applied Nano  
AIP – AIP Advances  
Scholars.Direct – Recent Advances in Photonics and Optics  
HSPC – International Journal of Physics Research and Applications  
PIERS2019 Conference  
MRS Online Proceeding Library