

PERSONAL INFORMATION **Francesco Floris**



<http://fisica.unipv.it/nanophotonics>

<http://fisica.unipv.it/personale/Persona.php?ID=325>

Sex **Male** | Date of birth **25/08/1980** | City of birth **Pavia** | Nationality **Italian**

PROFESSIONAL SKILLS

Experimental Condensed Matter Physics:

Spectroscopic Techniques, Microscopy Techniques, Plasmonics, Conjugated Organic Materials and Metamaterials (especially Organic Nanofibers, Bragg Grating and Bloch Surface Wave-Based Structures), Computational Finite-Difference Time-Domain (FDTD) Maxwell-Equations Solving Method.

- Hard skills
- Fourier transform (FT) and dispersive spectroscopy (both energy and time resolved)
 - dip-coating techniques
 - vacuum and cryogenics related procedures
 - atomic force microscopy (AFM)
 - finite-difference time-domain (FDTD) method based computational simulations

EDUCATION AND TRAINING

From July 2015 to January 2016 **Visiting Researcher** at the Photonics Center
Supervisor Prof. Luca Dal Negro (Ultrafast Nanomaterials and Nanostructure Optics Laboratory)
Department of Electrical and Computer Engineering - College of Engineering
Boston University – Massachusetts (USA)

Since November 2012 **Ph.D. Student** in Physics, Curricula of Matter Physics
Advisor Prof. Franco Marabelli (Photonics and Nanostructures Optics Laboratory)
Department of Physics - University of Pavia (Italy)

2012 **Master 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)

2009 **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

DIDACTIC ACTIVITIES

2014/15 Tutor in the Medical Physics Course (Harvey in English Language) at Department of Medicine & Surgery – University of Pavia

2013/14 Tutor in the General Physics Course at Department of Pharmacology – University of Pavia

2013-2014 Teacher in the Orientation Course for High School Students at Department of Physics – University of Pavia

PERSONAL SKILLS

Mother tongue **Italian**

Other language	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
English	C1	C1	C1	C1	C1

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

Language Skills 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" supported by Regione Autonoma della Sardegna.

Emotional Skills

- Analysis Ability
- Synthesis Talent
- Decision-make Capacity
- High Responsibility

Relationship Skills

- Excellent Communicator
- Competent Broker
- Able to Plan and Manage Partnerships

Management Skills

- Great Leadership
- Planning Aptitude
- Highly Focusing Faculties
- Extremely Determined

Computer Skills

- Good command of
 - operative system environment Microsoft® Windows™
 - operative system environment Linux
 - Microsoft® Office™ tools

- high performance Maxwell equations solver Lumerical® FDTD Solutions™
- data analysis software Origin™
- Sufficient command of
 - high level environment for numerical computation Mathcad™
 - markup language LaTeX
 - programming language LabVIEW™
 - programming language C/C++

SCIENTIFIC PRODUCTION

- Journal Papers
- [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. Volume6, Pages: 500-507
February 2015
 DOI: 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 Volume147, Pages:120–126
September 2014
 DOI: 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 Volume5, Pages:2935–2940
August 2014
 DOI: 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 Volume105, 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 Volume1, 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 Volume1, Page:116
February 2013
DOI: 10.1002/adom.201370015
- Conference Papers [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: <http://dx.doi.org/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: <http://dx.doi.org/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: <http://dx.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: <http://dx.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: <http://dx.doi.org/10.1557/opl.2014.80>

- Talks
- [7] A Plasmonic Structure for Emitting and Sensing Devices
[5th Young Research Meeting – 2014 SISSA Trieste (Italy)]
(Presenting Author)
 - [6] A Plasmonic Nano-Device for Near Infrared Applications
[2014 Nanotextonology 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, π -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^{#3} – 2013 Cargèse (France)]
(Presenting Author)
- Posters
- [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)]
 - [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
[SPP 2015 – 2015 Santa Margherita Ligure (Italy)]
(Presenting Author)
 - [7] Hybrid Plasmonic-Photonic Application-Oriented Platform
[SPP 2015 – 2015 Santa Margherita Ligure (Italy)]
 - [6] Thickness Controlled Sol-Gel Silica Films For Plasmonic Device: A Synergic Combination For Bio-Sensing
[2014 Symposium SiO₂, Advanced Dielectrics and Related Devices – 2014 Cagliari (Italy)]

- [5] Organic Flexible Photonic Structures for Amplified Light Emission
[EOSAM 2014 – 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)]
- International Schools
- [2] International Summer School on Nanomedicine ISSON14
2014 Thessaloniki (Greece)
(Contributed talk)
- [1] International Summer School on Plasmonics^{#3}
2013 Cargèse (France)
(Contributed talk)
- Conferences, Meetings and
Workshops
- [8] *Workshop* BU Materials Day 2015 - Nanomaterials in Medicine:
Improving Healthcare Through SMALL Innovations
2015 Boston (USA)
- [7] *Workshop* Surface Plasmon and Plasmonics SPP2015
2015 Santa Margherita Ligure (Italy)
(Poster presentations)
- [6] *Workshop* Communicating Science
2014 SISSA Trieste (Italy)
- [5] *Meeting* 5th 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)

Referee Activity

MRS Online Proceeding Library

I confirm that the information I have given is correct and to the best of my knowledge.
I understand that any false statement or omission may result in my application being delayed or withdrawn.
Permission is hereby given to use this information for the purposes of my application for work.

