



Curriculum Vitae – Francesco Dell'Olio

Present Position

Associate Professor in Electronics
Polytechnic University of Bari
Via E. Orabona 4, Bari – Italy
Ph.: +39 3493696134
francesco.dellolio@poliba.it

Italian National Scientific Qualification

2021 National Scientific Qualification for the position of Full Professor in
Electronics
Condensed matter physics

Previous positions

2019 – 2022 Assistant Professor, Polytechnic University of Bari
2015 – 2019 Research Fellow, Polytechnic University of Bari
2010 – 2015 Postdoc, Polytechnic University of Bari

Visiting positions

2021 Visiting Professor at the Chair of Integrated Systems and Photonics, Kiel University
2010 Visiting scientist at the European Space Research and Technology Centre, Opto-electronics Section
2008 – 2009 Visiting Ph.D. student at the European Space Research and Technology Centre, Opto-electronics Section

Education

2007 – 2009 Ph.D., Information and Communication Technology, Polytechnic University of Bari
1999 – 2005 MSEE, Polytechnic University of Bari

Awards and Recognition

2021 Senior Member, IEEE
2021 Senior Member, OPTICA

Research Interests

Research interests are focused on Silicon Photonics and Nanophotonics, particularly regarding modeling, design, and characterization of devices and integrated circuits for telecommunications and sensing.

My recent research activity has been devoted to the following topics:

- All-dielectric metasurfaces supporting bound states in the continuum in the near infrared
- Silicon photonic devices for polarization handling in photonic integrated circuits
- Silicon photonic gyroscopes

Coordination of studies and research projects

2021 – 2023 PI of a study on a fiber optic gyroscope based on COTS components funded by Northrop Grumman

Conference Organizations

2022 – 2023 SPIE Photonics West, Member of the Program Committee
2022 International Electronic Conference on Biosensors, Member of the Conference Committee
2021 CLEO: Organizer of the Special Symposium *Micro-Photonic Positioning, Navigation and Timing*
2021 IEEE Photonics Conference, Member of a Topic Committee
2020 – 2023 International Electronic Conference on Applied Sciences, Member of the Conference Committee
2020 Photonics: Optics, Lasers & Imaging, Technical Program Chair
2020 Int. Conf. on Optical Science, Photonics and Laser Advancements, Member of the Conference Committee

Editorial activities

2022 – Biosensors, Section Editor-in-Chief
2020 – Chemosensors, Member of the Editorial Board
2019 – Applied Sciences, Member of the Editorial Board
2016 – 2022 Journal of Sensors, Member of the Editorial Board

Journal Reviewer

Scientific Reports, Advances in Optics and Photonics, Sensors & Actuators B, Optics Express, Optics Letters, J. of Lightwave Technology, Sensors, IEEE Photonics J., IEEE Photonics Technology Letters, IEEE Trans. on Biomed. Circuits and Systems, IEEE Trans. on Magnetics, IEEE J. of Selected Topics in Quant. Electron., J. Optical Society of America B, Applied Optics, Optical Fiber Technology, Journal of Sensors, IEEE Sensors Journal, Micromachines, Applied Sciences, Optics Communications, Nanomaterials, Trans. on Emerging Telecommunications Technologies, and others.



Professional Memberships

Institute of Electrical and Electronics Engineers (IEEE, Senior Member)
OPTICA (Senior member)
International Society for Optics and Photonics (SPIE, Member)

Ph.D. Student/Postdoc Supervisor

Surjendu Bikash Dutta (Post doc, 2021 – 2022, now Research Fellow at Bielefeld University)
Marcello Asciola (MS 2019, Ph.D. expected in 2025)
Chiara Botrugno (MS 2022, Ph.D. expected in 2025)
Angela Cratere (MS 2022, Ph.D. expected in 2025)
Teresa Natale (MS 2022, Ph.D. expected in 2025)
Sarah Pragliola (MS 2022, Ph.D. expected in 2025)
Annabella la Grasta (MS 2021, Ph.D. expected in 2024)

Teaching

2022 – Electronic Embedded System Laboratory, Undergraduate Student Course, EE, Polytechnic University of Bari
2022 Flexible and Stretchable Electronics, PhD Course, Polytechnic University of Bari
2021 – 2022 Biomedical Electronics, Undergraduate Student Course, Biomedical Engineering, Polytechnic University of Bari
2020 – 2021 Lab-on-Chip devices, PhD Course, Polytechnic University of Bari
2016 – Digital Electronics, Undergraduate Student Course, Aerospace Engineering, Polytechnic University of Bari

Selected Publications

Journal Papers: 50+; Citations: 2500+; H-index: 26 (Source: SCOPUS)

Algorri, J. F.; Dell'Olio, F.; Ding, Y.; Labbé, F.; Dmitriev, V.; López-Higuera, J. M.; Sánchez-Pena, J. M.; Andreani, L. C.; Galli, M.; Zografopoulos, D. C. Experimental Demonstration of a Silicon-Slot Quasi-Bound State in the Continuum in near-Infrared All-Dielectric Metasurfaces. *Optics & Laser Technology* 2023, 161, 109199. <https://doi.org/10.1016/j.optlastec.2023.109199>.

Algorri, J. F.; Dell'Olio, F.; Roldán-Varona, P.; Rodríguez-Cobo, L.; López-Higuera, J. M.; Sánchez-Pena, J. M.; Dmitriev, V.; Zografopoulos, D. C. Analogue of Electromagnetically Induced Transparency in Square Slotted Silicon Metasurfaces Supporting Bound States in the Continuum. *Opt. Express* 2022, 30 (3), 4615. <https://doi.org/10.1364/OE.446720>.

Algorri, J. F.; Dell'Olio, F.; Roldán-Varona, P.; Rodríguez-Cobo, L.; López-Higuera, J. M.; Sánchez-Pena, J. M.; Zografopoulos, D. C. Strongly Resonant Silicon Slot Metasurfaces with Symmetry-Protected Bound States in the Continuum. *Opt. Express* 2021, 29 (7), 10374. <https://doi.org/10.1364/OE.415377>.

Dell'Olio, F.; Su, J.; Huser, T.; Sottile, V.; Cortés-Hernández, L. E.; Alix-Panabières, C. Liquid Biopsies: Photonic Technologies for Liquid Biopsies: Recent Advances and Open Research Challenges (*Laser Photonics Rev.* 15(1)/2021). *Laser & Photonics Reviews* 2021, 15 (1), 2170012. <https://doi.org/10.1002/lpor.202170012>.

Dhingra, N.; Dell'Olio, F. Ultralow Loss and High Extinction Ratio TM-Pass Polarizer in Silicon Photonics. *IEEE Photonics J.* 2020, 12 (6), 1–11. <https://doi.org/10.1109/JPHOT.2020.3032847>.

Conteduca, D.; Reardon, C.; Scullion, M. G.; Dell'Olio, F.; Armenise, M. N.; Krauss, T. F.; Ciminelli, C. Ultra-High Q/V Hybrid Cavity for Strong Light-Matter Interaction. *APL Photonics* 2017, 2 (8), 086101. <https://doi.org/10.1063/1.4994056>.

Dell'Olio, F.; Conteduca, D.; Ciminelli, C.; Armenise, M. N. New Ultrasensitive Resonant Photonic Platform for Label-Free Biosensing. *Opt. Express* 2015, 23 (22), 28593. <https://doi.org/10.1364/OE.23.028593>.

Ciminelli, C.; Dell'Olio, F.; Armenise, M. N.; Soares, F. M.; Passenberg, W. High Performance InP Ring Resonator for New Generation Monolithically Integrated Optical Gyroscopes. *Opt. Express* 2013, 21 (1), 556. <https://doi.org/10.1364/OE.21.000556>.

Passaro, V. M. N.; Dell'Olio, F. Scaling and Optimization of MOS Optical Modulators in Nanometer SOI Waveguides. *IEEE Trans. Nanotechnology* 2008, 7 (4), 401–408. <https://doi.org/10.1109/TNANO.2008.920207>.

Dell'Olio, F.; Passaro, V. M. Optical Sensing by Optimized Silicon Slot Waveguides. *Opt. Express* 2007, 15 (8), 4977. <https://doi.org/10.1364/OE.15.004977>.

Complete list:

<https://www.scopus.com/authid/detail.uri?authorId=57203065113>