Francesco Basso Basset

Curriculum Vitae

Summary

Brief overview of my academic appointments and scientific achievements, detailed in the following.

- National Scientific Habilitation (ASN) - Associate Professor level, SSD 02/B1 (now 02/PHYS-03).
- PhD-level education in condensed-matter, AMO, and quantum physics.
  - (2018) PhD in Materials Science and Nanotechnology at the University of Milano-Bicocca.
  - (2016-17) 8-month research traineeship at the Institute of Semiconductor and Solid State Physics of the Johannes Kepler University in Linz, funded by Erasmus+.
  - (2014) Bachelor's and Master's Degree in Physics (maximum marks) at the University of Milan.
- Research activity at the Physics Department of the Sapienza University of Rome.
  - (02/2022-03/2025) Researcher (RTDa, FIS/03 02/B1), university-funded.
  - (03/2021-01/2022) Postdoctoral researcher, funded by the project FET Open QUROPE.
  - (02/2018-02/2021) Postdoctoral researcher, funded by the project ERC Starting Grant SPQRel.
- Partecipation to 5 international and 3 national research projects as a postgraduate researcher, including a co-PI role of the Sapienza unit in a PNRR-funded project.
- Scientific collaboration with several partners from 13 research institutions all across Europe.
- Co-authorship of 22 publications (8 first-author, 7 second-author) on prestigious peer-reviewed journals, including Science Advances, Physical Review Letters, Nano Letters, Nature Communications, and Optica.
  - 645 total citations, 361 on first-author papers, 12 h-index (Scopus).
- Scientific dissemination at international conferences and institutions.
  - 7 invited talks, 4 seminars, 12 contributed talks, 8 posters.
- Received funding for research projects, mobility periods, and other awards for a total amount of € 149.000.
- Lecturer of 3 university courses at the Sapienza University of Rome.
- Examiner for the final exam of B.Sc., M.Sc., Ph.D. candidates, assistance to the supervision of thesis activities.
- Reviewer for 10 scientific journals and a European funding agency.
- Involvement in several outreach activities.

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Work Experience

04/2025–current **Tenure-track Assistant Professor (RTT)**, *Politecnico di Milano, Physics Department*, Milan (Italy)

Position funded by the Politecnico di Milano for teaching and research activities inherent to the experimental condensed matter physics division (research discipline 02/PHYS-03 sector PHYS-03/A of the Italian Ministry of Research).

02/2022–03/2025 **Researcher (RTDa)**, *Sapienza University of Rome, Physics Department*, Rome (Italy)

Main research topics related to the development of single and entangled photon sources based on quantum dots and promising novel quantum emitters and to their application in quantum information and communication.

Position funded by the Sapienza University of Rome for teaching and research activities inherent to the experimental condensed matter physics division (research discipline FIS/03 sector 02/B1 of the Italian Ministry of Research). Participation in multiple national and international research projects: FET Open Qurope (02/22–02/24), Quantera QD-E-QKD (05/22–03/25), CN1, Centro Nazionale di Ricerca HPC, Big data e Quantum Computing, Spoke 10 (09/22–03/25), Rome Technopole Flagship Project 5 (11/22–03/25, co-PI role), National Quantum Science and Technology Institute Spoke 4 (12/22–03/25), QUID (Quantum Italy Deployment) European Quantum Communication Infrastructure (01/23–03/25), European Photonic Quantum Computer (01/24–03/25).

03/2021–01/2022 **Postdoctoral Researcher**, *Sapienza University of Rome, Physics Department*, Rome (Italy)

Research project on quantum communication using entangled photons emitted from quantum dots, performed in the Nanophotonics group (P.I.: Prof. Rinaldo Trotta, link) under the project FET Open QUROPE.

Achieved secure quantum communication at a distance based on entanglement generated by quantum dots (work published on *Science Advances*) in collaboration with the Quantum Information Lab group lead by Prof. Fabio Sciarrino.

02/2018–02/2021 **Postdoctoral Researcher**, *Sapienza University of Rome, Physics Department*, Rome (Italy)

Research project on entangled photon sources based on epitaxial quantum dots, performed in the Nanophotonics group (P.I.: Prof. Rinaldo Trotta, link) under the project ERC Starting Grant SPQRel.

Main scientific goals achieved related to the original use of quantum dots in quantum optics experiments, such as entanglement swapping (published on *Physical Review Letters*) and quantum teleportation (published on *npj Quantum Information*).

Active international collaborations with several research institutes: Johannes Kepler University Linz (Prof. Armando Rastelli), University of Paderborn (Prof. Klaus D. Jöns), KTH Stockholm (Prof. Val Zwiller), Tyndall National Institute Cork (Prof. Emanuele Pelucchi), University of Milano-Bicocca (Prof. Stefano Sanguinetti).

Education and Training

12/2014–03/2018 **PhD in Materials Science and Nanotechnology**, *University of Milano-Bicocca*, Milan (Italy)

Research project focused on the design, modeling and optical characterization of an innovative class of GaAs nanostructures, based on droplet epitaxy, as a material for the development of entangled photon sources. Secondary activities on similar semiconductor quantum dots and ultrathin films of transition metal dichalcogenides for other applications in optoelectronics. Thesis title: GaAs nanostructures for the generation of entangled photons: design, development, and spectroscopy. Activities performed at the Laboratory of Semiconductor Spectroscopy of the University of Milano-Bicocca in close collaboration with the Interuniversity Center L-NESS in Como.

11/2016–06/2017 **Research Traineeship**, *Johannes Kepler University Linz, Institute of Semiconductor and Solid State Physics*, Linz (Austria)

Research period spent abroad during the PhD program working in advanced optical spectroscopy laboratories and in a semiconductor microfabrication cleanroom. Supported by the Erasmus+ Traineeship program (supervisor: Prof. Rinaldo Trotta, mentor: Prof. Armando Rastelli).

03/2012–07/2014 **Master's Degree in Physics**, *University of Milan*, Milan (Italy), *mark 110 out of 110, cum laude*

Thesis title: Elastic and plastic properties of Ge mesostructures integrated on Si investigated by optical spectroscopy. Activity performed at the Laboratory of Semiconductor Spectroscopy of the University of Milano-Bicocca in close collaboration with the Interuniversity Center L-NESS in Como.

10/2008–02/2012 **Bachelor's Degree in Physics**, *University of Milan*, Milan (Italy), *mark 110 out of 110, cum laude*

Thesis title: Time-resolved emission spectroscopy of free carbon clusters. Activity performed at the Interdisciplinary Centre for Nanostructured Materials and Interfaces of the University of Milan.

09/2003–07/2008 **Secondary School Leaving Certificate in Scientific Studies**, *Liceo Scientifico Statale "Edoardo Amaldi"*, Alzano Lombardo (BG, Italy), *mark 100 out of 100*

Publications

Bibliometric Indicators

Hirsch (H) index: 11 (Scopus)

Google Scholar (link). Citations: 1039. *h*-index: 15.

Scopus (link). Citations: 645. *h*-index: 12.

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Publications

[1] Freund J., Basso Basset F., Krieger T. M., Laneve A., Beccaceci M., Rota M. B., Buchinger Q., Covre da Silva S. F., Stroj S., Höfling S., Huber-Loyola T., Kueng R., Rastelli A., Trotta R., and Gühne O., Entanglement and purity can help to detect systematic experimental errors. arXiv:2503.09459 (2025).

[2] Laneve A., Ronco G., Beccaceci M., Barigelli P., Salusti F., Claro-Rodriguez N., De Pascalis G., Suprano A., Chiaudano L., Schöll E., Hanschke L., Krieger T. M., Buchinger Q., Covre da Silva S. F., Neuwirth J., Stroj S., Höfling S., Huber-Loyola T., Castaneda M. A. U., Carvacho G., Spagnolo N., Rota M. B., Basso Basset F., Rastelli A., Sciarrino F., Jöns K. and Trotta R., Quantum teleportation with dissimilar quantum dots over a hybrid quantum network. arXiv:2409.07875 (2024).

[3] Laneve A., Rota M. B., Basso Basset F.*, Beccaceci M., Villari V., Oberleitner T., Reum Y., Krieger T. M., Buchinger Q., Covre da Silva S. F., Pfenning A., Stroj S., Höfling S., Rastelli A., Huber-Loyola T. and Trotta, R., Wavevector-resolved polarization entanglement from radiative cascades. *Nat. Commun.* **16(1)**, 6209 (2025). *equal contributions with first author

[4] Rota M. B., Krieger T. M., Buchinger Q., Beccaceci M., Neuwirth J., Huet H., Horová N., Lovicu G., Ronco G., Covre da Silva S. F., Pettinari G., Moczała-Dusanowska M., Kohlberger C., Manna S., Stroj S., Freund J., Yuan X., Schneider C., Ježek M., Höfling S., Basso Basset F., Huber-Loyola T., Rastelli A. and Trotta R., A source of entangled photons based on a cavity-enhanced and strain-tuned GaAs quantum dot. *eLight* **4**, 13 (2024).

[5] Basso Basset F., Rota M. B., Beccaceci M., Krieger T. M., Buchinger Q., Neuwirth J., Huet H., Stroj S., Covre da Silva S. F., Ronco G., Schimpf C., Höfling S., Huber-Loyola T., Rastelli A. and Trotta R., Signatures of the optical Stark effect on entangled photon pairs from resonantly pumped quantum dots. *Phys. Rev. Lett.* **131**, 166901 (2023).

[6] Schimpf C., Basso Basset, F., Aigner M., Attenender W., Ginés L., Undeutsch G., Reindl M., Huber D., Gangloff D., Chekhovich E. A., Schneider C., Höfling S., Predojević A., Trotta R. and Rastelli A., Hyperfine interaction limits polarization entanglement of photons from semiconductor quantum dots. *Phys. Rev. B* **108**, L081405 (2023).

[7] Pirard G., Basso Basset, F., Bietti, S., Sanguinetti S., Trotta R. and Bester G., Effects of random alloy disorder, shape deformation, and substrate misorientation on the exciton lifetime and fine structure splitting of GaAs/$Al_xGa_{1-x}As$ (111) quantum dots. *Phys. Rev. B* **107(20)**, 205417 (2023).

[8] Basso Basset F., Valeri M., Neuwirth J., Polino E., Rota M. B., Poderini D., Pardo C., Rodari G., Roccia E., Covre da Silva S. F., Ronco G., Spagnolo N., Rastelli A., Carvacho G., Sciarrino F. and Trotta R., Daylight entanglement-based quantum key distribution with a quantum dot source. *Quantum Sci. Technol.* **8**, 025002 (2023).

[9] Neuwirth J., Basso Basset F., Rota M. B., Hartel J.-G., Sartison M., Covre da Silva S. F., Jöns K. D., Rastelli A. and Trotta R., Multipair-free source of entangled photons in the solid state. *Phys. Rev. B* **106**, L241402 (2022).

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[10] Neuwirth J., Basso Basset F., Rota M. B., Covre da Silva S. F., Jöns K. D., Rastelli A. and Trotta R., Multipair emission effects in quantum dot-based entangled photon sources. *Proc. SPIE 12206, Quantum Nanophotonic Materials, Devices, and Systems 2022*, 1220603 (2022).

[11] Laneve A., Rota M. B., Basso Basset F., Fiorente N. P., Krieger T. M., Covre da Silva S. F., Buchinger Q., Stroj S., Höfling S., Huber-Loyola T., Rastelli A., Trotta R. and Mataloni, P., Experimental multi-state quantum discrimination in the frequency domain with quantum dot light. arXiv:2209.08324 (2022).

[12] Carvacho G., Roccia E., Valeri M., Basso Basset F., Poderini D., Pardo C., Polino E., Carosini L., Rota M. B., Neuwirth J., Covre da Silva S. F., Rastelli A., Spagnolo N., Chaves R., Trotta R. and Sciarrino F., Quantum violation of local causality in urban network with hybrid photonic technologies. *Optica* **9**, 572-578 (2022).

[13] Vichi S., Bietti S., Basso Basset F., Tuktamyshev A., Fedorov A. and Sanguinetti S., Optically controlled dual-band quantum dot infrared photodetector. *Nanotechnology* **12** (2022).

[14] Neuwirth J., Basso Basset F., Rota M. B., Roccia E., Schimpf C., Jöns K. D., Rastelli A. and Trotta R., Quantum dot technology for quantum repeaters: from entangled photon generation towards the integration with quantum memories. *Materials for Quantum Technology* **1**, 043001 (2021).

[15] Basso Basset F., Valeri M., Roccia E., Muredda V., Poderini D., Neuwirth J., Spagnolo N., Rota M. B., Carvacho G., Sciarrino F. and Trotta R., Quantum key distribution with entangled photons generated on-demand by a quantum dot. *Science Advances* **7(12)**, eabe6379 (2021).

[16] Schimpf C., Reindl M., Basso Basset F., Jöns K. D., Trotta R. and Rastelli A., Quantum dots as potential sources of strongly entangled photons for quantum networks. *Applied Physics Letters* **118**, 100502 (2021) [Editor's Pick].

[17] Ranjbar Jahromi I., Juska G., Varo S., Basso Basset F., Salusti F., Trotta R., Gocalinska A., Mattana F. and Pelucchi E., Optical properties and symmetry optimization of spectrally (excitonically) uniform site-controlled GaAs pyramidal quantum dots. *Applied Physics Letters* **118**, 073103 (2021).

[18] Basso Basset F.*, Salusti F., Schweickert L., Rota M. B., Tedeschi D., Covre da Silva S. F., Roccia E., Zwiller V., Jöns K. D., Rastelli A. and Trotta R., Quantum teleportation with imperfect quantum dots. *npj Quantum Information* **7**, 7 (2021). *corresponding author

[19] Rota M. B., Basso Basset F., Tedeschi D. and Trotta R., Entanglement teleportation with photons from quantum dots: toward a solid-state based quantum network. *IEEE Journal of Selected Topics in Quantum Electronics* **26(3)**, 1-16 (2020).

[20] Bietti S., Basso Basset F., Tuktamyshev A., Bonera E., Fedorov A. and Sanguinetti S., High-temperature droplet epitaxy of symmetric GaAs/AlGaAs quantum dots. *Scientific Reports* **10**, 6532 (2020).

[21] Basso Basset F., Rota M. B., Schimpf C., Tedeschi D., Zeuner K. D., Covre da Silva S. F., Reindl M., Zwiller V., Jöns K. D., Rastelli A. and Trotta R., Entanglement swapping with photons generated on-demand by a quantum dot. *Physical Review Letters* **123(16)**, 160501 (2019).

[22] Basso Basset F.*, Bietti S., Tuktamyshev A., Vichi S., Bonera E. and Sanguinetti S., Spectral broadening in self-assembled GaAs quantum dots with narrow size distribution. *Journal of Applied Physics* **126(2)**, 024301 (2019). *corresponding author

[23] Bietti S., Basso Basset F., Scarpellini D., Fedorov A., Ballabio A., Esposito L., Elborg M., Takashi K., Nemcsics A., Tóth L., Manzoni C., Vozzi C. and Sanguinetti S., Ga metal nanoparticle-GaAs quantum molecule complexes for terahertz generation. *Nanotechnology* **29(36)**, 365602 (2018).

[24] Basso Basset F.*, Bietti S., Reindl M., Esposito L., Fedorov A., Huber D., Rastelli A., Bonera E., Trotta R. and Sanguinetti S., High-yield fabrication of entangled photon emitters for hybrid quantum networking using high-temperature droplet epitaxy. *Nano Letters* **18(1)**, 505-512 (2018). *corresponding author

[25] Marzegalli A., Cortinovis A., Basso Basset F., Bonera E., Pezzoli F., Scaccabarozzi A., Isa F., Giovanni Isella G., Zaumseil P., Capellini G., Schroeder T. and Miglio L., Exceptional thermal strain reduction by a tilting pillar architecture: Suspended Ge layers on Si (001). *Materials & Design* **116**, 144-151 (2017).

[26] Vangelista S., Cinquanta E., Martella C., Alia M., Longo M., Lamperti A., Mantovan R., Basso Basset F., Pezzoli F. and Molle A., Towards a uniform and large-scale deposition of MoS_2 nanosheets via sulfurization of ultra-thin Mo-based solid films. *Nanotechnology* **27(17)**, 175703 (2016).

Presentations

Invited talks

05/2023 OPAL 2023, 6th International Conference on Optics, Photonics and Lasers (Funchal, Madeira Island, Portugal).

12/2022 EQEP 2022, 8th International Workshop on Engineering of Quantum Emitter Properties at the University of Stuttgart (Stuttgart, Germany).

07/2022 QREdU 2022, Workshop on Quantum Research and Education in Europe and in Ukraine, online.

09/2020 YIQIS 2020, Young Italian Quantum Information Science Conference, online.

01/2019 PQE-2019, 49th Winter Colloquium on the Physics of Quantum Electronics (Snowbird, Utah, USA).

09/2018 NanoInnovation 2018 at the Sapienza University of Rome (Rome).

09/2017 Semicon Nano 2017, 6th International Workshop, Epitaxial Growth and Fundamental Properties of Semiconductor Nanostructures at the Centro Congressi Sala Bianca del Teatro Sociale in Como (Como).

Talks

11/2024 SPW 2024, Single Photon Workshop at the Edinburgh International Conference Centre (Edinburgh, UK).

03/2024 QD2024, 12th International Conference on Quantum Dots at the Audimax TUM conference center (Munich, Germany).

06/2023 OECS 18, International conference on optics of excitons in confined systems at the University of Salento (Lecce).

08/2022 SPIE Optics + Photonics 2022, Quantum Nanophotonic Materials, Devices, and Systems 2022 at the San Diego Convention Center (San Diego, California, USA).

10/2021 IQIS 2021, 13th Italian Quantum Information Science Conference at the Centro Congressi Federico II (Napoli).

09/2021 OECS 17, International conference on optics of excitons in confined systems, online.

12/2020 QD2020, 11th International Conference on Quantum Dots, online.

11/2020 QTech 2020, Quantum Technology International Conference, online.

10/2020 Quantum 2020, IOP Publishing Virtual Conference, online.

01/2020 POM20, Photonics Online Meetup 1st edition, online.

11/2017 Italian Crystal Growth 2017, Materials and Methods in Crystal growth at the University of Milano-Bicocca (Milano).

10/2017 FisMat 2017, Italian National Conference on the Physics of Matter at the ICTP-SISSA Miramare Campus (Trieste).

Posters

12/2023 EQEP 2023, 9th International Workshop on Engineering of Quantum Emitter Properties at the University of Paderborn (Paderborn, Germany).

10/2023 Quantum technology from fundamental science to real world applications, postgraduate summer school at the Centro di Cultura Scientifica Ettore Majorana (Erice).

03/2022 N.764 WE-Heraeus-Seminar, Photonic Quantum Technologies – A Revolution in Communication, Sensing, and Metrology at the Physikzentrum Bad Honnef (Bad Honnef, Germany).

10/2019 QLight 2019, Quantum devices for non-classical light generation and manipulation at the Centro di Cultura Scientifica Ettore Majorana (Erice).

09/2018 NOEKS 14, 14th International Conference on Nonlinear Optics and Excitation Kinetics in Semiconductors at the TU Berlin (Berlin, Germany).

09/2017 OECS 2017, International conference on optics of excitons in confined systems at the University of Bath (Bath, UK).

02/2016 19th International Winterschool on New Developments in Solid State Physics (Mauterndorf, Austria).

07/2014 International solid-state physics school Epioptics-13 and workshop Silicene-1 at the Centro di Cultura Scientifica Ettore Majorana (Erice).

Seminars

06/2024 'Entangled photons from quantum dots in quantum information and communication', invited seminar at the Physics Department of the University of Basel (Basel, Switzerland), as part of the international outreach project QuanTour (link).

12/2023 'Entangled photons from quantum dots in quantum information and communication', invited seminar at the Institute of Photonics and Quantum Sciences of the Heriot-Watt University (Edinburgh, UK).

12/2023 'Quantum dots as photon sources for quantum information and communication technology', invited seminar at the 'Photonics as a key enabling technology' workshop organized by the SPIE Student Chapter at the University of Trento (Trento).

03/2023 Pitching session to an audience of companies and academics from the Lazio's innovation ecosystem at the 'Networking Day' organized by the Rome Technopole Foundation at the Sapienza University of Rome (Rome).

Teaching

Courses

03/2024–current **Lecturer**, *Sapienza University of Rome*, Rome (Italy)
Lecturer for the 'General Physics Laboratory: Mechanics' course of the Bachelor's Degree in Physics.

10/2022–11/2023 **Lecturer**, *Sapienza University of Rome*, Latina (Italy)
Lecturer for the 'Physics' course of the Bachelor's Degree in Pharmaceutical Chemistry and Technology.

02/2022–03/2023 **Lecturer**, *Sapienza University of Rome*, Latina (Italy)
Lecturer for the 'General Physics I' course of the Bachelor's Degrees in Environmental and Industrial Engineering and Information Engineering.

Related activities

05/2024 External examiner for a PhD candidate in Microelectronics at the Department of Electrical, Computer and Biomedical Engineering of the University of Pavia.

06/2022–current Member of the Committee and examiner for the final exam of the Degree in Physics.

01/2019–current Assistance to the supervision of theses for B.Sc. (Fabrizio Mercoli), M.Sc. (Francesco Salusti, Claudio Pardo, Mattia Beccaceci, Valerio Villari, Leone Chiaudano, Silvia Improta, Giorgio De Pascalis), and Ph.D. (Julia Neuwirth) students in Physics.

Lectures

11/2024 'Quantum teleportation', lecture for Physics Master's students attending the course Non Linear and Quantum Optics at the Sapienza University of Rome (Rome).

06/2024 'Photons and quantum technologies', lecture for the special course "Quantum Mechanics and Nanotechnology" of the Physics Degree's Honours Programme at the Sapienza University of Rome (Rome).

04/2021 'Entanglement generation from semiconductor quantum dots', open seminar for Physics third-year students attending the course Solid-state physics experiments at the University of Milano-Bicocca (Milano).

12/2020, 12/2021, 11/2022 'Sources of single photons based on semiconductor quantum dots', lecture for Physics Master's students attending the course Non Linear and Quantum Optics at the Sapienza University of Rome (Rome).

12/2020, 12/2021 'Sources of single photons based on semiconductor quantum dots', lecture for Physics Master's students attending the course Physics and Nanostructures at the Sapienza University of Rome (Rome).

02/2020, 03/2021 'Nanophotonics lab activity introduction', lecture for Physics Master's students attending the course Physics Laboratory II for Condensed Matter Physics at the Sapienza University of Rome (Rome).

Honors and Awards

2024 National Scientific Habilitation (ASN) to apply for permanent positions of Associate Professor in Italian Universities, in the Sector 02/B1 - Experimental Physics of Matter, released by the Italian Ministry of University and Research (MUR) with a unanimous decision of the National Committee.

2024 Research project "Progetti di Ricerca - Progetti Medi" funded by the Sapienza University of Rome, title: On-demand polarization qubits from a symmetric optical microcavity, for a total amount of € 12000.

2023 Research project "Digital transition through AESA (Active Electronically Scanned Array) radar technology, quantum cryptography and quantum communications", co-PI responsible for the research line titled: "Free-space quantum communication with quantum dot-optimized technology", funded by the Rome Technopole Foundation under the Flagship Project 5 for a total amount of € 115000.

2023 Awarded among the "Premium contributions for researchers and research fellows to strengthen their professional status and strengthen the research system of Lazio" funded by PR FSE+ 2021-2027 program of the Regione Lazio for a total amount of € 2000.

2021 Research project "Progetti per Avvio alla Ricerca" funded by the Sapienza University of Rome, title: Experimental investigation of novel entangled states in the photon pair generation from a quantum dot, for a total amount of € 3200.

2020 Research project "Progetti per Avvio alla Ricerca" funded by the Sapienza University of Rome, title: Solid-state-based entangled photon emitters matched to Rb vapor cells as a viable interconnect technology for quantum networks, for a total amount of € 2000.

2016–2017 Erasmus+ Traineeship for an international mobility period at the Johannes Kepler University Linz (Austria), for a total amount of € 3600.

2008–2012 Scholarship "Progetto Lauree Scientifiche" funded by the Società Italiana di Fisica, second place at the national level, for a total amount of € 12000.

Outreach

09/2023, 09/2024 Guide for the exhibit "Rome Technopole" as part of the European Researchers' Night at the Città dell'Altra Economia (Rome).

05-06/2024 Created social media content for the international outreach QuanTour (link), in preparation of the International Year of Quantum Science and Technology 2025.

05/2023, 05/2024 Guide for lab tours as part of the White Night of Rome museums at the Sapienza University of Rome (Rome).

04/2022, 04/2023, 04/2024 Guide for the exhibits "Dire l'indicibile" as part of the Italian Quantum Weeks: "Viaggio nella meccanica quantistica" (2024) at the Botanical Garden of Rome, "L'entanglement quantistico" (2023) and "La sovrapposizione quantistica" (2022) at the Classical Art Museum, Sapienza University of Rome (Rome).

10/2022 Co-author of the article "Comunicare nell'era dei quanti - Crittografia, teletrasporto e network quantistici" for Asimmetrie, the magazine of the National Institute for Nuclear Physics (INFN).

06/2021 Co-author of the article "Prima distribuzione wireless di una chiave quantistica generata con quantum dot" for Scienza in rete, an online magazine on science and current affairs.

09/2015 Guide for the exhibit "Luce Lego" as part of MeetMeTonight, Notte dei Ricercatori at the Giardini Indro Montanelli (Milano).

10/2006 Guide for the exhibit "Energia in mostra" as part of BergamoScienza at the Ex Convento di San Francesco (Bergamo).

Other Professional Duties

03/2021–current Scientific reviewer for the journals npj Quantum Information (link), Physical Review X, Physical Review Letters, Physical Review B, Physical Review Materials, Applied Physics Letters, Communication Physics, Optics Express, Reviews of Modern Physics, Applied Physics Reviews.

12/2020–current Review Editor for the journal Frontiers in Photonics, Quantum Optics section. (link)

06/2023–09/2023 External reviewer in the QuantERA Call 2023.

06/2022–06/2023 Member of the Society of Photo-optical Instrumentation Engineers (SPIE).

11/2020–01/2022 Postdoctoral representative in the Physics Department Council, Sapienza University of Rome.

Additional Scientific Training

10/2016 Introductory course on high-vacuum technologies from the AIV - Associazione Italiana di Scienza e Tecnologia at the University of Milano-Bicocca (Milano).

09/2015 7th School on Organic Electronics at the Lake Como School of Advanced Studies (Como).

07/2015 International School of Atomic and Molecular Spectroscopy at the Centro di Cultura Scientifica Ettore Majorana (Erice).

09/2012 16th JCNS Laboratory Course Neutron Scattering at the Forschungszentrum Jülich (Jülich, Germany) and Heinz Maier-Leibnitz Zentrum (Garching, Germany).