



Luigi Vesce

Date of birth: 20/09/1981 | **Nationality:** Italian | **Gender:** Male | **Email address:**

luigi.vesce@uniroma2.it | **Website:**

www.chose.uniroma2.it/senior-researchers/102-luigi-vesce.html | **LinkedIn:**

www.linkedin.com/in/luigi-vesce-9770b2122 | **ResearchGate:**

www.researchgate.net/profile/Luigi-Vesce |

Address: Department of Biomedicine and Prevention, University of Rome "Tor Vergata", Via Montpellier 1, 00133, Rome, Italy (Work)

Address: Department of Physics, University of Rome "Tor Vergata", Via della Ricerca Scientifica 1, 00133, Rome, Italy (Work)

Address: Centre for Hybrid and Organic Solar energy, University of Rome "Tor Vergata", Viale Pietro Gismondi Casale 11 Tor Vergata, 00133, Rome, Italy (Work)

WORK EXPERIENCE

 **TOR VERGATA UNIVERSITY OF ROME – ROME, ITALY**

ASSISTANT PROFESSOR – 07/2025 – CURRENT

- Affiliated with the Department of Biomedicine and Prevention.
- Research and Development in printable electronics and new era photovoltaics, Department of Electronic Engineering.
- Research and Development in Condensed Matter Physics, Department of Physics.
- Teaching.
- Journals editorial board member.
- Conferences organizing committee member.

 **TOR VERGATA UNIVERSITY OF ROME – ROME, ITALY**

UNIVERSITY LECTURER – 09/2019 – CURRENT

- Physics, Degree Courses in Health Professions, Faculty of Medicine and Surgery (from 2025/2026).
- Computer Science, Master Degree in Veterinary Medicine, Faculty of Medicine and Surgery (from 2024/2025).
- Nanoelectronics, Master Degree in Electronic Engineering, Faculty of Engineering (from 2019/2020 to 2024/2025).

 **EU – GENK, BELGIUM**

LECTURER (PHD SCHOOL) – 10/2025 – 10/2025

- "Upscaling and Stability Issues" at TESTARE PhD School on Stability of Perovskite cells and modules.

 **CONSORZIO INTERUNIVERSITARIO NAZIONALE PER LA SCIENZA E TECNOLOGIA DEI MATERIALI (INSTM) – ROME, ITALY**

SENIOR RESEARCHER – 07/2025 – 07/2025

- Design and optimization of perovskite modules for sensor applications.

 **TOR VERGATA UNIVERSITY OF ROME – ROME, ITALY**

ADVANCED POSTDOC RESEARCHER (ITALIAN "ASSEGNISTA DI RICERCA DI QUARTA FASCIA") – 02/2024 – 06/2025

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Research and Development in printable electronics and new era photovoltaics.
- Teaching.
- Journals editorial board member.
- Conferences organizing committee member.

- External reviewer PhD thesis at University of Parma.
- External examiner PhD thesis at Universidad de Alcalá.

 **TOR VERGATA UNIVERSITY OF ROME - CNR** – ROME, ITALY

LECTURER (POST-GRADUATION SCHOOLS) – 07/2018 – 06/2025

- "Dye-sensitized solar cell technology" at GreenNano Summer School (2024/2025).
- "Renewable energy. Third generation photovoltaic" at MARIS II level Master course on "Reporting Innovation Sustainability", Economy Faculty (from 2018/2019 to 2023/2024).
- "Dye-sensitized solar cell technology" at Multidisciplinary Summer School "Sustainable Development Labs" (July 2018).

 **TOR VERGATA UNIVERSITY OF ROME** – ROME, ITALY

Website www.chose.uniroma2.it

SENIOR RESEARCHER (ITALIAN "RTDA") – 01/2019 – 01/2024

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Research and Development in third generation photovoltaic technology.
- Teaching.
- Journals editorial board member.
- Conferences organizing committee member.
- External examiner Master's degree at Reykjavik University.

 **ITALIACAMP** – ROME, ITALY

LECTURER – 03/2023 – 04/2023

- Circular economy, sustainability, renewable energy.

 **G+LYTE** – AMIENS, FRANCE

SCIENTIFIC CONSULTANT – 01/2020 – 12/2020

- Upscaling of efficient, stable and robust dye-sensitized Solar Modules. Stability achieved.

 **STUDIO VIBRACCI SAFETY MANAGEMENT** – ROME, ITALY

ENGINEER – 12/2017 – 12/2019

- Consulting activity concerning conformity certifications of machines by reports and asseverations.

 **INGEM SRL** – ROME, ITALY

ENGINEERING COLLABORATOR – 05/2016 – 12/2019

- Realization of solar cell educational kit.

 **TOR VERGATA UNIVERSITY OF ROME** – ROME, ITALY

Website www.chose.uniroma2.it

SENIOR POSTDOC RESEARCHER (ITALIAN "ASSEGNISTA DI RICERCA DI TERZA FASCIA") – 07/2017 – 01/2019

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Research and Development of third generation photovoltaic technology (DSSC, Perovskite, OPV).
- Technology transfer.

 **TOR VERGATA UNIVERSITY OF ROME** – ROME, ITALY

POSTDOC RESEARCHER (ITALIAN "ASSEGNISTA DI RICERCA DI SECONDA FASCIA") – 07/2016 – 07/2017

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Research and Development of third generation photovoltaic technology (large area, modules and panels).
- Technology transfer.

 **TOR VERGATA UNIVERSITY OF ROME** – ROME, ITALY

FREELANCER RESEARCHER – 03/2016 – 06/2016

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Technical and scientific consulting.

 **BEMA SRL – ROME, ITALY**

TECHNICAL MANAGER – 12/2015 – 02/2016

- Quality control.
- Telecommunications services integration.

 **DYEPOWER CONSORTIUM (PERMASTEELISA SPA, UNIVERSITY OF ROME TOR VERGATA, FERRARA AND TURIN) – FONTE NUOVA (RM), ITALY**

R&D TEAM MANAGER – 01/2014 – 12/2015

- Team management and activity planning.
- Supervisor and responsible of research, development and production of organic and hybrid photovoltaic devices for building facade applications according to the international standards.
- Optimization, innovation and quality control of clean room production processes.
- Pilot line development for 10,000 m²/year of dye-sensitized solar cell (DSSC) panel production.

 **DYEPOWER CONSORTIUM (PERMASTEELISA SPA, ERG, UNIVERSITY OF ROME TOR VERGATA, FERRARA AND TURIN) – FONTE NUOVA (RM), ITALY**

SENIOR RESEARCHER – 11/2010 – 12/2013

- Industrial research on DSSC PV technology.
- Optimization of production processes, devices and materials.
- Building facade applications.
- International standard certification.

 **DYERS – ROME, ITALY**

ENGINEERING COLLABORATOR – 01/2009 – 12/2013

- Formulation, development and production of materials for dye -sensitized solar cell technology.

 **TOR VERGATA UNIVERSITY OF ROME – ROME, ITALY**

PHD FELLOW – 11/2007 – 10/2010

- Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering.
- Realization of efficient photo-anodes for dye-sensitized solar cell technology.
- see Education - Ph.D.

 **TELIND SRL - INDITEL GROUP – ROME, ITALY**

DESIGN ENGINEER – 10/2006 – 12/2007

- Architectural, radio and optical design of systems for mobile communications.
- Installation supervision of systems and equipments.

 **UNIVERSIDADE DE AVEIRO – AVEIRO, PORTUGAL**

PREDOC RESEARCH FELLOW – 03/2006 – 07/2006

- Investigation on the design, optimization, simulation and demonstration of an all-optical packet switch in the framework of the project FCT e-Photon/One.

● **ITALIAN NATIONAL SCIENTIFIC QUALIFICATION (ASN)**

11/2024 – CURRENT

Associate Professor - Experimental Condensed Matter Physics

07/2024 – CURRENT

Associate Professor - Electronics

● EDUCATION AND TRAINING

2014 – 2015

INTERNAL AUDITOR AND QUALITY MANAGER Tor Vergata University of Rome - URS Italia

- Uni EN ISO 9001:2008 standard.
- Auditing and management of quality systems.

2007 – 2010

PH.D. TELECOMMUNICATIONS ENGINEERING AND MICROELECTRONICS Tor Vergata University of Rome

- Activity performed at CHOSE and Dyepower.

Thesis Realization of efficient photo-anodes for dye-sensitized solar cell technology

2003 – 2005

MASTER OF TELECOMMUNICATIONS ENGINEERING Tor Vergata University of Rome

- Experimental thesis in the framework of the project e-Photon/One at Fondazione Ugo Bordoni (FUB) of the Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione (ISCOM), research body of the Italian Communication Ministry.

Final grade 110/110 cum laude |

Thesis Distributed optical amplification based on Raman scattering for DWDM applications in C, L, U bands

2000 – 2003

BACHELOR OF TELECOMMUNICATIONS ENGINEERING Tor Vergata University of Rome

- Experimental thesis at Fondazione Ugo Bordoni (FUB) of the Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione (ISCOM), research body of the Italian Communication Ministry.

Thesis Clock optical recovery through mode locking techniques on NRZ signals

● PUBLICATIONS

Publications list

Link https://uniroma2-my.sharepoint.com/:w:/g/personal/luigi_vesce_uniroma2_eu/Eb_M_98EaNBmCMj5tYrTukB44kZI5-ljJBafTKqetbDGA?e=nSUtee

Scopus ID: 34878110300

Link <https://www.scopus.com/authid/detail.uri?authorId=34878110300>

ORCID ID: 0000-0003-3322-8688

Link <https://orcid.org/0000-0003-3322-8688> [View this author's ORCID profile](#)

ResearchGate

Link www.researchgate.net/profile/Luigi-Vesce

● CONFERENCES AND SEMINARS

Speaker at International conferences

Link https://uniroma2-my.sharepoint.com/:w:/g/personal/luigi_vesce_uniroma2_eu/EbUcz5Ryv0xFkUMWOCqrbTYB08r6p7GK71Yxfv7ryDuGBA?e=G2XPqk

Activities for International conferences

1. Invited technical program co-chair al 3th IEEE International Symposium on Advanced Electrical and Communication Technologies (ISAECT), Ibn Tofail University, Kenitra (Marocco), online, 25-27/11/2020.
2. Invited session chairman alla 9th European Conference on Renewable Energy Systems (ECRES), Istanbul (Turchia), online, "Photovoltaic Materials and Devices", 21-22/04/2021.
3. Invited session chairman alla 38th European Photovoltaic Solar Energy Conference (EU PVSEC), online, "Advances in Perovskite Materials and Process Engineering for High Efficiency Cells", 06-10/09/2021.
4. Organizing committee member:
 - Energy Engineering and Power Technology World Forum (Power-Energy), 13-15 June 2022, Rome (Italy)
 - International Conference on Materials Science, Engineering & Technology, 7-9 September 2022, Singapore
 - International Conference on Power and Energy Engineering (Power 2023), 6-7 November 2023, Dubai
 - Global Experts Conference on Renewable and Sustainable Energy (GECRSE-23), 27-29 July 2023, Osaka (Japan)
 - Global Summit on Power Energy and Engineering (GSPEE2024), 18-20 March, Lisbon (Portugal)
 - International Conference on Applied Science and Engineering (ASEFORUM2014), 4-6 March 2024, Firenze (Italy)
 - 2nd Global Meet on Nanotechnology (GMNANO2024), 24-26 June 2024, Porto (Portugal)
 - 2nd Global Meet on Renewable and Sustainable Energy (GMRSE2024), 27-29 June 2024, Porto (Portugal)
 - 2nd International Forum on Environmental Science and Applications (ENVIRONFORUM2024), 11-13 April 2024, Munich (Germany)
 - Global Summit on Renewable Energy (GSREN-2024), 5-7 June 2024, Venezia (Italy)
 - 7th Global Edition & Exhibition on Renewable and Sustainable Energy (RENEWABLE-2025), 25-28 April 2025, Amsterdam (Netherlands)
5. Conference advisory committee at 1st International Gold Conference on Engineering and Business Sciences, Barcellona (Spain), 1-2 June 2023.
6. Scientific committee member at European Photovoltaic Solar Energy Conference (EU PVSEC) from September 2023.
7. Paper reviewer at IEEE International Conference on Flexible, Printable Sensors and Systems (FLEPS 2023), Boston, Massachusetts (USA), 9-12 July 2023. Track 9: Printed Smart Tags and Communication Devices.
8. Co-organizer of "Sostenibilità e Ambiente - approcci interdisciplinari: transizione energetica, decarbonizzazione, chimica sostenibile ed energie rinnovabili" nell'ambito del festival dello sviluppo sostenibile 2023 e 2024.
9. Scientific committee and chairman at FuturePV Workshop, Nicosia (Cyprus), 20-22 May 2025.

EDITORIAL ACTIVITY

List

- Editorial board member: Energies MDPI, Journal of Basic and Applied Sciences, Journal of Coating Technology and Innovation, Applied Photovoltaic Technology, Multidisciplinary Journal of Engineering Sciences, New Energy Exploitation and Applications
- Reviewer: Energy Materials, Chemical Papers, Energies, Nanomaterials, Computer and Electrical Engineering, Energy Letters, Electronics and Telecommunications Research Institute Journal, Journal of Materials Chemistry A, Thin Solid Films, IEEE Journal of Photovoltaics, Crystals, IEEE Transactions on Electron Devices, ACS Energy Letters, Advanced Energy Materials, Applied Energy Materials, Journal of Basic and Applied Sciences, Materials Futures, Solar RRL, Applied Physics Letters, Smart Science, Nature, Nature energy, Small, Scientific Reports, Journal of Materials Chemistry C, Applied Physics Letters, ACS Applied Polymer Materials, ACS Applied Energy Materials, Journal of Materials Chemistry A, Advanced Energy and Sustainability Research, Materials Futures, Smart Science.
- Guest-editor Energies MDPI for the special issue "Novel materials and processes for Photovoltaic technologies", selected as post-conference publication at IEEE International Symposium on Advanced Electrical and Communication Technologies (ISAECT) 2020
- Lead Guest-editor Energies MDPI for the special issue "Development and Applications of Solar Energy System"
- Associate editor in "Photovoltaic Materials and Devices", Frontiers in Photonics
- Review editor in "Green and Sustainable Chemistry", Frontiers in Chemistry
- Co-editor article collection Frontiers in Materials "Advances in Nanostructured Metal Oxide for Low-Cost and Efficiency of Third-Generation Photovoltaic Solar Cells"

PROJECTS

Principal investigator

- PRIN TECHPRO (Thermoionic Energy Conversion for High Power RadiatiOn)
- HORIZON PRIMA Sun2Fork (Sustainable greenhouse farming systems:from sun to fork)
- VINCI (fotoVoltaico INnovativo per appliCazione Indoor) - FSC
- Visiting call at University of Rome "Tor Vergata".

Collaborator

- CHEOPS (Production technology to achieve low Cost and Highly Efficient phOtovoltaic Perovskite Solar cells) - Horizon H2020
- ESPResSO (Efficient Structures and Processes for Reliable Perovskite Solar Modules) - Horizon H2020
- UNIQUE (Carbon Based Perovskite Solar Cells with UNI-Directional Electron Bulk Transport: in the QUEst of a Short Time to Market) - Horizon Solar-era.net
- Graphene FlagShip - Horizon H2020
- IMPRESSIVE (ground-breaking tandem of transPaRent dyE SenSitisled and peroVskite solar cElls) - Horizon H2020
- DIAMOND (Ultra-stable, highly efficient, low-cost perovskite photovoltaics with minimised environmental impact) - Horizon Europe
- VIPERLAB (Fully Connected Virtual and Physical Perovskite Photovoltaic Lab) - Horizon H2020
- PEARL (Flexible Perovskite Solar Cells with Carbon Electrodes) - Horizon Europe
- Edifici ad Alta Efficienza per la Transizione Energetica - Ricerca di Sistema Elettrico Nazionale (RdS)

● **HONOURS AND AWARDS**

01/2025

2025 Clean Energy and Sustainability Travel Award – Clean Energy and Sustainability

04/2024

2024 Electronics Travel Award – Electronics MDPI

01/2016

2015 Semiconductor Science and Technology Article Highlights Collection – IOP Publishing

● **NETWORKS AND MEMBERSHIPS**

03/2023 – CURRENT

Photovoltaic Committee Member - Engineers Order of Rome

02/2007 – CURRENT

Engineers Order of Rome

01/2023 – 12/2023

SIE - Italian Society of Electronics

● **COLLABORATIONS**

Universities and Research Institutes

EPFL, Losanna; IMEC, Lovanio; Laboratoire de Réactivité et Chimie des Solides, CNRS, Amiens; Fraunhofer ISE, Friburgo; Research Centre for Sustainable Energy, Università di Cipro; CNR-ICCOM, Sesto Fiorentino; CNR-ISM, Roma; Center for Colloid and Surface Science-CSGI, Sesto Fiorentino; Research on Renewable Energy and Sustainability-R2ES Lab, Università di Siena; Dipartimento di Ingegneria Industriale, Università di Padova; CNR-IPCF, Messina; Department of Electrical Engineering, Technical University of Munich-TUM; CEA-Francia; Università di Porto; University of Uppsala, Sweden; Fraunhofer Institute for Laser Technology (ILT), Aachen; Faculty of Physical Chemistry, University of Belgrade, Serbia; University of Manchester, England; University of Cyprus, Cyprus.

Companies

Dyename AB, Stoccolma; Solaronix, Losanna; Dycotec Ltd, Swindon; Saule Technologies Ltd, Varsavia; Cicci Research, Grosseto; Roberglass, Calci; Gusmini, Treviglio; BTicino/Legrand, Varese; Specialcarbon, Pordenone; Great Cell Solar, Roma; MPG Italia; PixelVoltaic, Porto; G+Lyte, Amiens; ENI; Bticino/Legrand; Rise Technology.

• During the collaboration with G+Lyte company (partially in the research contract with the University of Rome "Tor Vergata), I coordinated the Tor Vergata Unit.

Rome , 05/09/2025