

PERSONAL INFORMATION

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EDUCATION AND TRAINING

- 2003 – 2006 **PhD in Electromagnetism - Thesis Title: *Tecniche non distruttive di caratterizzazione meccanica ed elettromeccanica di materiali dalla scala macroscopica a quella nanoscopica***
SAPIENZA University of Rome, Italy (graduated on 06 September 2007)
- 2004 **Postgraduate Summer School**
X Scuola Nazionale di Scienza dei Materiali: I Course *Fondamenti della scienza dei materiali* and II Course *Nanomeccanica e tribologia*, Sestri Levante (Genova, Italy), 27 September - 8 October 2004
- 2004 **Postgraduate Summer School**
International School of Physics 'Enrico Fermi' 160-th Course: *From nanostructures to nanosensing applications*, Varenna (Lecco, Italy), 20-30 July 2004
- 2003 **Postgraduate Summer School**
International School of Quantum Electronics 39-th Course: *Microresonators as Building Blocks for VLSI Photonics*, Erice (Trapani, Italy), 18-25 October 2003
- 1997 – 2003 **Master of Science (corresponding to M.Sc.+B.Sc.) in Electronic Engineering - Thesis Title: *Realizzazione di un apparato sperimentale di misura di generazione di seconda armonica ottica***
SAPIENZA University of Rome, Italy (graduated with top grade 110/110 *cum laude* on 29 September 2003)
- 1997 **Scientific high school diploma**
Liceo Scientifico Statale 'Aristotele', Rome, Italy (graduated with top grade 60/60)

WORK EXPERIENCE

- May 2022 – Today **Associate Professor**
Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome (Italy)
Sector Experimental physics of matter, nano-characterizations, nanotechnology, and nano-materials (SSD: FIS/01, SC: 02/B1)
- May 2019 – April 2022 **Associate postdoctoral researcher and senior lecturer**
Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome (Italy)
Sector Experimental physics of matter, nano-characterizations, nanotechnology, and nano-materials (SSD: FIS/01, SC: 02/B1)
- March 2019 – April 2019 **Fixed-term contract employee**
NanoShare s.r.l.
Researcher
- 2007 – 2018 **Postdoctoral Research Fellow**

Department of Basic and Applied Sciences for Engineering (formerly Department of Energetics), SAPIENZA University of Rome (Italy)

Responsible for and researcher at the Scanning Probe Microscopy Laboratory

Sector Nanotechnology, nanomaterials and nano-characterizations

PROJECTS:

- November 2017 – October 2018 *Sviluppo della tecnica scanning Kelvin probe microscopy per la mappatura su scala nanometrica di work function e densità di portatori in materiali per applicazioni avanzate* (L. 240/2010)
- November 2016 – October 2017 *Progettazione, realizzazione e applicazione di una metodologia sperimentale basata su microscopia a scansione di sonda per la caratterizzazione magnetica quantitativa di nanomateriali* (L. 240/2010)
- October 2015 – September 2016 *Applicazione di tecniche basate su microscopia a scansione di sonda per la rivelazione di nanomateriali in matrici polimeriche e biologiche* (L. 240/2010)
- April 2014 – September 2015 *Sviluppo di tecniche basate su microscopia a scansione di sonda per la rivelazione di nanomateriali in matrici polimeriche e biologiche* (L. 240/2010)
- April 2013 – March 2014 *Microscopie a scansione di sonda di materiali per applicazioni biotecnologiche e biomedicali* (L. 240/2010)
- April 2010 – March 2013 *Caratterizzazione meccanica di materiali polimerici compositi nanostrutturati mediante microscopia acustica a forza atomica ed altre tecniche basate su microscopia a scansione di sonda* (L. 449/1997)
- April 2009 – March 2010 *Sviluppo, caratterizzazione e applicazioni di dispositivi e materiali nanostrutturati* (L. 449/1997)
- April 2007 – March 2009 *Sviluppo e applicazione della tecnica AFAM (Atomic Force Acoustic Microscopy) per la realizzazione di mappe elastiche di materiali nanostrutturati* (L. 449/1997)

December 2006 – January 2007 **Fixed-term contract employee**

Department of Basic and Applied Sciences for Engineering (formerly Department of Energetics), SAPIENZA University of Rome (Italy)

Researcher at the Scanning Probe Microscopy Laboratory

Sector Nanotechnology, nanomaterials and nano-characterizations

PROJECT:

Caratterizzazione mediante la tecnica AFAM (microscopia acustica a forza atomica) di materiali nanostrutturati a base carbonio

HONORS, AWARDS, AND APPOINTMENTS

March 2021 – Today **Member of PhD Scientific Board**

Member of the PhD Scientific Board of the PhD course *Modelli matematici per l'ingegneria, elettromagnetismo e nanoscienze* of SAPIENZA University of Rome (Italy)

Starting from Cycle XXXVII - A.Y. 2021/2022

October 2019 – Today **Technical responsible**

Research Center for Nanotechnology applied to Engineering of SAPIENZA University of Rome (CNIS), SAPIENZA University of Rome (Italy)

Sector Technical responsible of the AFM platforms of Sapienza Nanotechnology and Nanoscience Laboratory (SNN-Lab)

May 2019 – Today **Associate postdoctoral researcher and senior lecturer**

Associate postdoctoral researcher and senior lecturer (tenure track) - *Ricercatore a tempo determinato di tipo B* (SSD: FIS/01, SC: 02/B1)

Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy (Codice Concorso 2018RTDB014, D.R. n. 1828/2018 del 12/07/2018).

July 2018 National Academic Qualification as Full Professor

Qualified according to the National Academic Qualification System as Full Professor
Abilitazione Scientifica Nazionale (ASN) - Settore concorsuale **02/B1**
Fisica Sperimentale della Materia - Fascia I (Bando D.D. 1532/2016)
Validity: 26 July 2018 - 26 July 2024.

April 2017 National Academic Qualification as Associate Professor

Qualified according to the National Academic Qualification System as Associate Professor
Abilitazione Scientifica Nazionale (ASN) - Settore concorsuale **02/B1**
Fisica Sperimentale della Materia - Fascia II (Bando D.D. 1532/2016)
Validity: 12 April 2017 - 12 April 2023.

2017 Certified Sentinel of Science Award Recipient

Awarded by Publons Board as one of the top 10 per cent of researchers contributing to the peer review in the field of Physics and Astronomy in 2016

July 2016 – April 2019 Chairman

Appointed Chairman of NanoShare s.r.l. (<http://www.nanoshare.eu/home.html>).

February 2016 – June 2016 Chief Executive Officer (CEO)

Appointed CEO of NanoShare s.r.l. (<http://www.nanoshare.eu/home.html>).

2015 Award of research project contract

Award by European Food Safety Authority (EFSA) call OC/EFSA/AMU/2014/01 - *Generating, collecting, collating, synthesising and analysing evidence supporting preparatory work for evidence-based Scientific Assessment in EFSA* - LOT 2: Chemical/toxicological - Sub-domain 2.6: Nanomaterials.

CASE STUDY: *Case-study on synthetic amorphous silica (SAS), SiO₂ the food additive E551.*

November 2017 – October 2018 Fellowship

Fellowship granted by Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy (Bando Dipartimento SBAI n. 3/2017 published on 14 February 2017).

November 2016 – October 2017 Fellowship

Fellowship granted by Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy (Bando Dipartimento SBAI n. 7/2016 published on 26 April 2016).

October 2015 – September 2016 Fellowship

Fellowship granted by Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy (Bando Dipartimento SBAI n. 4/2015 published on 27 February 2015).

April 2014 – March 2015 Fellowship

Fellowship granted by Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy (Bando Dipartimento SBAI n. 6/2013 published on 01 July 2013).

April 2009 – March 2010 Fellowship

Fellowship granted by *Consorzio Nazionale Interuniversitario per le Scienze Fisiche della Materia (CNISM)*, CNISM Research Unit at SAPIENZA University of Rome, Italy (Bando Nazionale CNISM published on 04 February 2009).

November 2003 – October 2006 **Scholarship**

Full scholarship for attending the PhD course in Electromagnetism granted by SAPIENZA University of Rome, Italy, after having passed the competitive entrance examination.

2001 **Grant**

Grant for technical assistance in the *Didactic Laboratory of Optics*, Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy.

2001 **Grant**

Grant for didactic assistance, Department of Electronic Engineering, SAPIENZA University of Rome, Italy.

2012 – 2018 **Representative of the Postdoctoral Research Fellows**

Appointed Representative of the Postdoctoral Research Fellow in the Council of Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy.

TEACHING ACTIVITY

2007 – today **Academic courses**

Faculty of Civil and Industrial Engineering, SAPIENZA University of Rome (Italy)

As Associate Professor Classes taught as **associate professor** (didactic load as *professore di II fascia*):

2023 – 2023 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Condensed matter physics and applications (6 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Fisica I (3 CFU - co-professor), degree course in Mechanical Engineering.

As Postdoctoral Senior Lecturer Classes taught as **postdoctoral senior lecturer** (didactic load as *ricercatore a tempo determinato*):

2021 – 2022 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Elements of condensed matter physics (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Fisica I (3 CFU - co-professor), degree course in Mechanical Engineering.

2020 – 2021 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Elements of condensed matter physics (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Fisica I (3 CFU - co-professor), degree course in Mechanical Engineering.

2019 – 2020 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
Fisica I (3 CFU - co-professor), degree course in Mechanical Engineering.
Fisica II (3 CFU - co-professor), degree course in Aerospace Engineering.

As Adjunct Professor Classes taught as **adjunct professor** (*professore a contratto*):

- 2018 – 2019 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
- 2017 – 2018 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
- 2016 – 2017 *Electron microscopies and related techniques* (3 CFU - professor, taught in **English**), degree course in Nanotechnology Engineering.
- 2015 – 2016 *Fisica I* (3 CFU - co-professor), degree course in Mechanical Engineering.
- 2014 – 2015 *Fisica Generale I* (3 CFU - co-professor), degree courses in Civil and Industrial Engineering (branch of Latina).
- 2011 – 2012 *Laboratorio Sperimentale di Fisica* (3 CFU - co-professor), degree course in Mechanical Engineering.
- 2010 – 2011 *Fisica II* (9 CFU - adjunct professor), degree course in Mechanical Engineering.
- 2009 – 2010 *Fisica* (Modulo II - Termodinamica ed Elettromagnetismo) (6 CFU - co-professor), degree course in Civil Engineering.
- 2008 – 2009 *Laboratorio Sperimentale di Fisica* (3 CFU - professor), degree course in Mechanical Engineering.
- 2007 – 2008 *Laboratorio Didattico e Storia della Fisica* (4 CFU - professor), degree course in Mechanical Engineering.

2008 – today **Lectures and seminars**

Post lauream schools Lectures given at **post lauream schools**:

- 2022 **Invited lecture** *Quantitative issues in magnetic force microscopy: When problems are the beginning of solutions* at 'Jesus Reyes Corona' Weekly Seminars, Institute of Physics, Benemerita Universidad Autonoma de Puebla (Puebla, Mexico), 11 November 2022.
- 2019 **Invited lecture** *AFM methods for mechanical property measurements at the nanoscale* at 19-th Advanced School in Pharmaceutical Technology: Characterization of Colloidal Nanocarriers, Soverato (Catanzaro, Italy), 10 September 2019.
- 2009 **Invited lecture** *Mechanical characterization at nanoscale: atomic force acoustic microscopy* at 1-st SPM Given School - Industrial applications of scanning probe microscopy, Venice (Italy), 5 May 2009.

Graduate and undergraduate schools Lectures given at **graduate and undergraduate schools**:

- 2008 – 2020 **Seminars** *Microscopie a scansione di sonda* yearly taught in the course of *Microscopie e Tecniche di Nanocaratterizzazione* taught by prof. Marco Rossi, degree course in Industrial Nanotechnologies Engineering, Faculty of Civil and Industrial Engineering, SAPIENZA University of Rome (Italy).
- 2008 – 2010 **Seminars** *Ottica geometrica e ottica di Fresnel* yearly taught in the course of *Microscopie e Tecniche di Nanocaratterizzazione* taught by prof. Marco Rossi, degree course in Industrial Nanotechnologies Engineering, Faculty of Civil and Industrial Engineering, SAPIENZA University of Rome (Italy).

2004 – 2016 **Tutor activity**

Faculty of Civil and Industrial Engineering, SAPIENZA University of Rome (Italy)

- 2015 – 2016 *Laboratorio Sperimentale di Fisica* (prof. Marco Rossi), degree course in Mechanical Engineering.

2014 – 2015	Laboratorio Sperimentale di Fisica (prof. Marco Rossi), degree course in Mechanical Engineering.
2013 – 2014	Laboratorio Sperimentale di Fisica (prof. Marco Rossi), degree course in Mechanical Engineering.
2009 – 2010	Fisica I (prof. Paolo Postorino), degree course in Safety and Protection Engineering.
2009 – 2010	Fisica Generale I (profs. Andrea Bettucci and Marco Rossi), degree course in Mechanical Engineering.
2008 – 2009	Fisica Generale I (profs. Andrea Bettucci and Marco Rossi), degree course in Mechanical Engineering.
2007 – 2008	Fisica Generale I (prof. Marco Rossi), degree course in Mechanical Engineering.
2007 – 2008	Fisica Generale III (prof. Adriano Alippi), degree course in Clinical Engineering.
2006 – 2007	Fisica Generale (prof. Andrea Bettucci), degree course in Electric-Energetic Engineering.
2006 – 2007	Fisica Generale I (prof. Marco Rossi), degree course in Mechanical Engineering.
2006 – 2007	Fisica Generale III (prof. Adriano Alippi), degree course in Clinical Engineering.
2005 – 2006	Fisica Generale (prof. Andrea Bettucci), degree course in Electric-Energetic Engineering.
2005 – 2006	Fisica Generale I (prof. Marco Rossi), degree course in Mechanical Engineering.
2005 – 2006	Fisica Generale II and Fisica Generale III (prof. Adriano Alippi), degree course in Clinical Engineering.
2004 – 2005	Fisica Generale I (prof. Marco Rossi), degree course in Mechanical Engineering.
2004 – 2005	Fisica Generale II (prof. Adriano Alippi), degree course in Clinical Engineering.

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English ⁽¹⁾	B2	B2	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

- ⁽¹⁾ Exam for the level **B2** (ESOL Certificate) passed on 16 July 2013 with the mark 93/100
Exam for the level **B1+** (ESOL Certificate) passed on 28 January 2012 with the mark 92/100

Computer skills Good command of Matlab, Labview, other software for data analysis.

SCIENTIFIC INFORMATION

Scientific skills

Scanning probe microscopy (SPM) techniques: atomic force microscopy (AFM) and scanning tunneling microscopy (STM).
SPM-based techniques for different functional characterizations of materials at the nanometer scale. In particular: atomic force acoustic microscopy, AFM indentation, torsional harmonics AFM for mechanical characterizations; magnetic force microscopy (MFM) for magnetic characterizations. Scanning capacitance microscopy, electric force microscopy, scanning Kelvin probe microscopy, conductive AFM for electric characterizations. Piezoelectric force microscopy and interferometric methods for piezoelectric characterizations. Thermoacoustic atomic force microscopy for the characterizations of the thermoacoustic emissions. Raman spectroscopy and tip-enhanced Raman spectroscopy (TERS).

Research interests My research interests are mainly focused on study of nanomaterials, nanosystems and nanodevices using scanning probe microscopy (SPM) techniques, in particular atomic force microscopy (AFM) and scanning tunneling microscopy (STM). Moreover, I am interested in the development of SPM-based techniques for different functional characterizations of materials at the nanometer scale. Since the beginning of my PhD in 2003, I have been interested in nanomechanical characterizations (also in temperature) using the combination of AFM and ultrasounds-based methods, as well as piezoelectric characterizations using AFM and interferometric techniques. Then, I completed the set of mechanical characterization methods with static and dynamic indentation by AFM. In recent years, my interests have been broadened including magnetic, electric, and thermoacoustic methods by AFM. More recently, I started working on Raman spectroscopy and tip-enhanced Raman spectroscopy (TERS).

Bibliometric / scientometric data The research activities led to the realization of more than 110 scientific papers on international peer reviewed journals and books chapters, 2000 total citations, and h-index of 26. The research activity has also produced more than 80 oral or poster communications, presented or co-authored, at international conferences.

ORAL PRESENTATIONS

16. *Quantitative issues in magnetic force microscopy*, [invited oral contribution](#) at *IEEE Advances in Magnetism (AIM) 2020-21*, Virtua Conference, 16 June 2021.
15. *H2020 CHALLENGES-Toward advanced clean room compatible plasmonic probes*, [oral contribution](#) at *E-MRS Spring Meeting*, Virtual Conference, 2 June 2021.
14. *Le piattaforme di Microscopia a Scansione di Sonda. Oltre la morfologia: nanometrologia e tanto altro*, [oral contribution](#) at *I primi 5 anni del Laboratorio di Nanotecnologie e Nanoscienze del CNIS*, Rome (Italy), 5 April 2017.
13. *Perspectives on quantitative nanomagnetometry with magnetic force microscopy*, [oral contribution](#) at *Materials 2016*, Catania (Italy), 15 December 2016.
12. *Nanomechanical characterizations with contact resonance atomic force microscopy*, [oral contribution](#) at *StSPM'16*, Bologna (Italy), 21 October 2016 (Book of Abstracts p. 44).
11. *Introduction to scanning probe microscopies*, [invited tutorial](#) at *NanoInnovation 2016*, Rome (Italy), 20 September 2016.
10. *Removing electrostatic artifacts: towards truly quantitative MFM*, [invited oral contribution](#) at *AFMeeting 2016: Il Incontro Utenti Italiani di Microscopia a Forza Atomica (AFM)*, Rome (Italy), 24 February 2016.
9. *AFM techniques for nanomechanical characterization of thin coatings*, [invited oral contribution](#) at *TMS 2015*, Orlando (Florida USA), 17 March 2015.
8. *Atomic force microscopy: a tool for functional characterizations at the nanoscale*, [invited tutorial](#) at *NanoForum 2014*, Rome (Italy), 22 September 2014.
7. *Nanomechanical characterization of soft materials and nanocomposites by atomic force microscopy*, [oral contribution](#) at *The 4th International Symposium on Surface and Interface of Biomaterials (ISSIB) 2013*, Rome (Italy), 27 September 2013.
6. *Nanotechnologies and atomic force microscopy techniques for functional characterizations*, [invited tutorial](#) at *NanoForum 2013*, Rome (Italy), 18 September 2013.
5. *Scanning probe microscopy techniques for mechanical characterization at nanoscale*, [oral contribution](#) at *NanoForum 2012*, Rome (Italy), 25 September 2012.
4. *Characterization of polyaniline-detonation nanodiamond nanocomposite fibers by atomic force microscopy based techniques*, [oral contribution](#) at *ICNMMCS 2012*, Turin (Italy), 19 June 2012.
3. *Microscopie di sonda per misure meccaniche su nanoscala*, [invited oral contribution](#) at *XXVIII Giornata della Misurazione*, Rome (Italy), 15 June 2009.
2. *Atomic force acoustic microscopy characterization of carbon-based materials*, [oral contribution](#) at *2007 ICU Wien*, Wien (Austria), 12 April 2007 (Digest p. 218).
1. *Local indentation modulus characterization via two contact resonance frequencies atomic force acoustic microscopy*, [oral contribution](#) at *E-MRS IUMRS ICM 2006 Spring Meeting*, Nice (France), 1 June 2006 (Digest p. F11).

PUBLICATIONS

As Editor Single [volumes](#), [books](#), and journals [special issues](#):

13. *Advanced Materials for Energy Storage/Conversion and Sustainable Processing Based on Electrochemical Processes and Related Characterization Methods*, M. Rossi, D. Dini, **D. Passeri**, J. Solla Gullón, special issue of Journal of Experimental and Theoretical Analyses (2023).
[ISSN: 2813-4648]
12. *Food Quality and Safety: Advances in Analytical Methods and Applications*, A. Sorbo, C. Zoani, **D. Passeri**, special issue of Separations (2021).
[ISSN: 2297-8739]
11. *NANOINNOVATION 2020*, M. Rossi, V. Morandi, **D. Passeri**, F.A. Scaramuzzo, M. Vittori Antisari (Eds.), AIP Conf. Proc. 2416 (2021).
[ISBN: 978-0-7354-4133-0]
10. *NANOINNOVATION 2019*, M. Rossi, **D. Passeri**, F.A. Scaramuzzo, M. Vittori Antisari (Eds.), AIP Conf. Proc. 2257 (2020).
[ISBN: 978-0-7354-2017-5]
9. *15th Eurasia Conference on Chemical Sciences(EuAsC₂S-15) - 5th-8th September 2018, Rome, Italy*, L. Dini, **D. Passeri**, C. Vergallo, M. Rossi, Pure and Applied Chemistry 91 (2019).
8. *NANOINNOVATION 2018*, M. Rossi, L. Dini, **D. Passeri**, M. Vittori Antisari (Eds.), AIP Conf. Proc. 2145 (2019).
[ISBN: 978-0-7354-1890-5]
7. *Exploitation of Multifunctional Nanomaterials for Biological Applications*, M. Rossi, **D. Passeri**, F.A. Scaramuzzo (Eds.), special issue of Molecules (2020).
[ISSN: 1420-3049]
6. *Nanocharacterization and Innovation at Nanoscale*, M. Rossi, M. Vittori Antisari, **D. Passeri** (Eds.), special issue of Applied Sciences (Switzerland) (2019).
[ISSN: 2076-3417]
5. *NANOINNOVATION 2017*, M. Rossi, L. Dini, **D. Passeri**, M. Vittori Antisari (Eds.), AIP Conf. Proc. 1990 (2018).
[ISBN: 978-0-7354-1706-9]
4. *NANOINNOVATION 2016*, M. Rossi, L. Dini, **D. Passeri**, M. Vittori Antisari (Eds.), AIP Conf. Proc. 1873 (2017).
[ISBN: 978-0-7354-1553-9]
3. *NanoItaly 2015*, M. Rossi, L. Dini, **D. Passeri**, M.L. Terranova, M. Vittori Antisari (Eds.), AIP Conf. Proc. 1749 (2016).
[ISBN: 978-0-7354-1406-8]
2. *NANOFORUM 2014*, M. Rossi, L. Dini, **D. Passeri**, M.L. Terranova (Eds.), AIP Conf. Proc. 1667 (2015).
[ISBN: 978-0-7354-1314-6]
1. *Acoustic scanning probe microscopy*, F. Marinello, **D. Passeri**, E. Savio (Eds.), Springer Berlin Heidelberg (2013).
[ISBN: 978-3-642-27493-0]

As Author Articles and conference papers in [peer-reviewed journals](#):

70. S. Dinarelli, A. Sikora, A. Sorbo, M. Rossi, **D. Passeri**, *Atomic force microscopy as a tool for mechanical characterizations at the nanometer scale*, Nanomater. Energy (in press) (2023).
[DOI: XXXXX] - IF = N.A.
69. C. Sbarigia, S. Dinarelli, F. Mura, L. Buccini, F. Vari, **D. Passeri**, M. Rossi, S. Tacconi, L. Dini, *Wild-type and SOD1-G93A SH-SY5Y under oxidative Stress: EVs characterization and topographical distribution of budding vesicles*, Appl. Nano 4, pp. 45-60 (2023).
[DOI: 10.3390/aplnano4010004]
68. A. Sorbo, E. Pucci, C. Nobili, I. Taglieri, **D. Passeri**, C. Zoani, *Food safety assessment: Overview of metrological issues and regulatory aspects in the European Union*, Separations 9, Article Number: 53, pp. 1-26 (2022).
[DOI: 10.3390/separations9020053] - IF = 3.344
67. D. Dini, F. Cognigni, **D. Passeri**, F.A. Scaramuzzo, M. Pasquali, M. Rossi, *Multiscale Characterization of Li-ion batteries through the combined use of atomic force microscopy and X-ray microscopy and considerations for a correlative analysis of the reviewed data*, J. Electrochem. Soc. 168, Article Number: 126522, pp. 1-19 (2021).
[DOI: 10.1149/1945-7111/ac4298] - IF = 4.316
66. M. Fidaleo, S. Tacconi, C. Sbarigia, **D. Passeri**, M. Rossi, A.M. Tata, L. Dini, *Current nanocarrier strategies improve vitamin B12 pharmacokinetics, ameliorate patients' lives, and reduce costs*, Nanomaterials 11, Article Number: 743, pp. 1-19 (2021).
[DOI: 10.3390/nano11030743] - IF = 5.719

65. L. Angeloni, **D. Passeri**, F.A. Scaramuzzo, P.G. Schiavi, F. Pagnanelli, M. Rossi, *Magnetic force microscopy characterization of core-shell cobalt-oxide/hydroxide nanoparticles*, J. Magn. Magn. Mater. 516, Article Number: 167299, pp. 1-9 (2020).
[DOI: 10.1016/j.jmmm.2020.167299] - IF = 2.993 - Corresponding Author
64. F. Aureli, M. Ciprotti, M. D'Amato, E. do Nascimento da Silva, S. Nisi, **D. Passeri**, A. Sorbo, A. Raggi, M. Rossi, F. Cubadda, *Determination of total silicon and SiO₂ particles using an ICP-MS based analytical platform for toxicokinetic studies of synthetic amorphous silica*, Nanomaterials 10, Article Number: 888, pp. 1-17 (2020).
[DOI: 10.3390/nano10050888] - IF = 5.076
63. F. Rinaldi, P.N. Hanieh, A. Imbriano, **D. Passeri**, E. Del Favero, M. Rossi, C. Marianecchi, S. De Panfilis, M. Carafa, *Different instrumental approaches to understand the chitosan coated niosomes/mucin interaction*, J. Drug Deliv. Sci. Tec. 55, Article Number: 101339, pp. 1-9 (2020).
[DOI: 10.1016/j.jddst.2019.101339] - IF = 3.981
62. M. Reggente, L. Angeloni, **D. Passeri**, P. Chevallier, S. Turgeon, D. Mantovani, M. Rossi, *Mechanical characterization of methanol plasma treated fluorocarbon ultrathin films through atomic force microscopy*, Front. Mater. 6, Article Number: 338, pp. 1-13 (2020).
[DOI: 10.3389/fmats.2019.00338] - IF = 3.515 - Corresponding Author
61. R. Petrucci, I. Chiarotto, L. Mattiello, **D. Passeri**, M. Rossi, G. Zollo, M. Feroci, *Graphene oxide: a smart (starting) material for natural methylxanthine detection*, Molecules 24, Article Number: 4247, pp. 1-17 (2019).
[DOI: 10.3390/molecules24234247] - IF = 3.060
60. M. Reggente, S. Kriegel, W. He, P. Masson, G. Pourroy, F. Mura, J. Faerber, **D. Passeri**, M. Rossi, H. Palkowski, A. Carradò, *How alkali-activated Ti surfaces affect the growth of tethered PMMA chains: a close-up study on the PMMA thickness and surface morphology*, Pure Appl. Chem. 91, pp. 1687-1694 (2019).
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May 2022 – today	Review Editor of the journal <i>Frontiers in Physics - Condensed Matter Physics</i> (ISSN Online: 2296-424X).
January 2020 – today	Associated Editor of the journal <i>Scanning</i> (ISSN Online: 1932-8745).
July 2016 – December 2019	Academic Editor of the journal <i>Scanning</i> (ISSN Online: 1932-8745).
April 2015 – December 2018	Editor-in-chief of the journal <i>Nanoscience and Nanometrology</i> (ISSN Print: 2472-3622 ; ISSN Online: 2472-3630), which I conceived, proposed to Publisher, and launched.
April 2014 – April 2015	Member of the Editorial Board of the journal <i>American Journal of Nanoscience and Nanotechnology</i> .
April 2014 – April 2015	Member of the Editorial Board of the journal <i>International Journal of Materials Science and Applications</i> .

October 2013 – April 2015 **Member of the Editorial Board** of the journal *International Scholarly Research Notices* (formerly *ISRN Biomedical Imaging*).

Project refereeing Since 2022 I have served as **Reviewer** of scientific projects for the French National Research Agency (ANR - Agence Nationale de la Recherche) for the following calls:

- **2023**: AAPG 2023 (1 project)
- **2022**: AAPG 2022 (1 project)

Journal refereeing Since 2009 I have collaborated as **Reviewer** with the journals:

- **2022**: *Nanoscale*, *Frontiers In Aging Neuroscience*, *Ultramicroscopy*, *Advanced Materials Technologies*, *Materials*, *Advanced Science*
- **2021**: *Applied Surface Science*, *Nano Letters*, *Advanced Science*, *Nanomaterials*, *JOM*, *Biochimica et Biophysica Acta - General Subjects*, *Advanced Materials Technologies*, *IEEE Sensors Journal*, *Polymer*, *Food Control*, *The Journal of Physical Chemistry*, *ACS Applied Electronic Materials*, *Microscopy and Microanalysis*, *Materials*
- **2020**: *Nanomaterials*, *Instrumentation Science & Technology*, *Ultramicroscopy*, *Journal of Magnetism and Magnetic Materials* (2 articles), *Thin Solid Films*
- **2019**: *Journal of Magnetism and Magnetic Materials*, *ACS Applied Nano Materials*, *Materials Chemistry and Physics*, *Nanoscale* (2 articles), *Nature Communications*, *Micro and Nanosystems*, *Ultramicroscopy*, *Biomedicine & Pharmacotherapy*
- **2018**: *Scientific Reports*, *Ultramicroscopy*, *Macromolecules*, *Micro and Nanosystems*, *Materials and Design* (3 articles), *Journal of Applied Physics*, *Colloids and Surfaces A*
- **2017**: *Nature Communications*, *Materials*, *ACS Applied Materials & Interfaces*, *Journal of Physics and Chemistry of Solids*, *Journal of Magnetism and Magnetic Materials*, *Ultramicroscopy*, *Instrumentation Science & Technology*, *Diamond and Related Materials*
- **2016**: *Biomacromolecules*, *ACS Nano*, *Ultramicroscopy*, *Nanomedicine: Nanotechnology, Biology, and Medicine* (2 articles), *Sensors*, *European Polymer Journal*, *Neues Jahrbuch für Mineralogie (Journal of Mineralogy and Geochemistry)*, *Ultrasonics*, *Journal of Applied Physics*, *Applied Sciences*, *Thin Solid Films*, *Materials Chemistry and Physics*
- **2015**: *Langmuir* (2 articles), *Micro & Nano Letters*, *Materials Chemistry and Physics*, *Thin Solid Films*, *Journal of Applied Physics*
- **2014**: *Nanoscale*, *Ultramicroscopy*, *Nanoscale Research Letters*, *RSC Advances*, *IET Science, Measurement and Technology*, *Journal of Applied Polymer Science*, *International Journal of Materials Science and Technology*, *American Journal of Nanoscience and Nanotechnology*, *Instrumentation Science and Technology*, *Applied Surface Science*, *American Journal of Nano Research and Application*, *Sensors*
- **2013**: *Applied Surface Science*, *Sensors*, *Nanomedicine*, *Micromachines*, *Thin Solid Films*
- **2012**: *Microscopy Research and Technique*, *Thin Solid Films*, *Journal of Nanomaterials*, *Nanoscale Research Letters*, *Characterization of Materials*
- **2011**: *Ultramicroscopy*, *Nanoscale Research Letters*
- **2010**: *Materials Today*, *Wear*, *Science and Technology of Advanced Materials*, *Journal of Nanoparticle Research*
- **2009**: *Nanoscience and Nanotechnology Letters*

Abstract refereeing Since 2023 I have served as **Reviewer** of abstracts for oral/poster contributions to scientific conferences:

- **2023**: NanoSAFE 2023, Grenoble (France), 5-9 June 2023 (12 abstracts)

Chairmanships I served as **chairman** of the following sessions of scientific conferences:

9. *Rheology and Analytical aspects of the 19-th Advanced School in Pharmaceutical Technology: Characterization of Colloidal Nanocarriers*, Soverato (Catanzaro, Italy), 11 September 2019.
8. *Advanced SPM techniques: methods and applications 2* of the congress *NanoInnovation 2018*, Rome (Italy), 13 September 2018.
7. *Keynote Session: Scanning Probe Microscopy: Touching and Probing Matter at the Nanoscale* of the congress *NanoInnovation 2018*, Rome (Italy), 13 September 2018.
6. *Multiscale characterization* of the congress *BioM&M*, Milan (Italy), 27 June 2018.

5. *Advanced functional nanomaterials* of the congress *NanoInnovation 2017*, Rome (Italy), 29 September 2017.
4. *Nanotechnology and innovation for electronics* of the congress *NanoInnovation 2017*, Rome (Italy), 29 September 2017.
3. *Nanocharacterization techniques* of the congress *NanoItaly 2015*, Rome (Italy), 22 September 2015.
2. *Plasma-based surface modifications* of the congress *The 4th International Symposium on Surface and Interface of Biomaterials (ISSIB) 2013*, Rome (Italy), 27 September 2013.
1. *Micro/nano structure and expression of macroscopic properties* of the congress *The 4th International Symposium on Surface and Interface of Biomaterials (ISSIB) 2013*, Rome (Italy), 28 September 2013.

Commission Memberships Activity as [member of the commissions](#) for the following procedures:

March 2023	<i>Membro Commissione selezione RTDA</i> , University of Catania (D.R. 795/2023).
February 2023	<i>Membro della Commissione Valutazione Dipartimento</i> (Decreto Direttoriale 15/2023 , Prot. 368 del 13/02/2023).
July 2022	<i>Membro effettivo commissione dottorato MODELLI MATEMATICI PER L'INGEGNERIA, ELETTRICITÀ E NANOSCIENZE - 38 ciclo</i> (Decreto N. 2530/2022 Prot. n. 0074583 del 25/08/2022).
October 2019	<i>Procedura Aperta per l'affidamento della 'Fornitura, Consegna, Installazione e Messa in Servizio di Microscopio a Forza Atomica nell'ambito del Progetto ATOM domanda Prot. n. 173-2017-17395 L.R. 13/2008' CIG 7872900A99 - CUP B86C18000620007</i> (Disposizione n. 3634/2019, Prot. n. 0087037 del 10/10/2019).

ADDITIONAL SCIENTIFIC INFORMATION

Memberships Member of the following scientific societies and professional orders:

2014 – today	<i>European Microscopy Society (EMS)</i> .
2014 – today	<i>Società Italiana di Scienze Microscopiche (SISM)</i> .
2015	<i>The Minerals, Metals and Materials Society (TMS)</i> .
2005 – today	<i>Ordine degli Ingegneri</i> of Rome, having obtained the licensure after having passed the entrance examination in 2004.

Organization of meetings I organized or served as member of the scientific or organizing committees of graduated and doctoral schools, scientific conferences, and meetings:

10. [Chair](#) of the *NanoInnovation Challenges School* at the congress *NanoInnovation 2021*, Rome (Italy), 21-24 September 2021.
9. [Chair](#) of the *NanoInnovation Scanning Probe Microscopy School* at the congress *NanoInnovation 2020*, Rome (Italy), 16-19 June 2020.
8. Member of the [steering committee](#) of the congress *NanoInnovation 2019*, Rome (Italy), 11-14 June 2019.
7. Member of the [workshop committee](#) (R. Marcelli, **D. Passeri**, M. Renzelli) of the workshop *Advanced Scanning Probe Microscopies* of the congress *NanoInnovation 2018*, Rome (Italy), 13 September 2018.
6. Member of the [programme committee](#) of the congress *NanoInnovation 2018*, Rome (Italy), 11-14 September 2018.
5. Coordinator of the [local organizing committee](#) of the congress *Eurasia Conference on Chemical Sciences (EuAsC₂S-15)*, Rome (Italy), 5-8 September 2018.
4. [Chair](#) of the Special Session *Nanoscale mechanical characterization* of the congress *The First International Conference on Materials, Mimicking, Manufacturing from and for Bio Application (BioM&M)*, Milan (Italy), 27-29 June 2018.
3. Member of the [programme committee](#) of the congress *NanoInnovation 2017*, Rome (Italy), 26-29 September 2017.
2. Coordinator of the [local organizing committee](#) of the congress *NanoInnovation 2016*, Rome (Italy), 20-23 September 2016.

1. Member of the [local organizing committee](#) of the congress *The 4th International Symposium on Surface and Interface of Biomaterials (ISSIB) 2013*, Rome (Italy), 24-28 September 2013.

Conferences Attendance to the following [conferences](#), international and national [meetings](#), and [workshops](#):

31. *NanoInnovation 2021*, Rome (Italy), 21-24 September 2021.
30. *E-MRS Spring Meeting*, Virtual Conference, 31 May - 4 June 2021.
29. *NanoInnovation 2020*, Rome (Italy), 15-18 September 2020.
28. *NanoInnovation 2019*, Rome (Italy), 11-14 June 2019.
27. *NanoInnovation 2018*, Rome (Italy), 11-14 September 2018.
26. *Eurasia Conference on Chemical Sciences (EuAsC₂S-15)*, Rome (Italy), 5-8 September 2018.
25. *The First International Conference on Materials, Mimicking, Manufacturing from and for Bio Application (BioM&M)*, Milan (Italy), 27-29 June 2018.
24. *NanoInnovation 2017*, Rome (Italy), 26-29 September 2017.
23. *Italian National Conference on Materials Science and Technology (Materials 2016)*, Catania (Italy), 12-16 December 2016.
22. *Science through Scanning Probe Microscopy 2016 - StSPM'16*, Bologna (Italy), 20-21 October 2016.
21. *NanoInnovation 2016*, Rome (Italy), 20-23 September 2016.
20. *Secondo Convegno Nazionale Nanotecnologie e Nanomateriali nel Settore Alimentare e loro Valutazione di Sicurezza*, Rome (Italy), 29 April 2016.
19. *AFMeeting 2016: Il Incontro Utenti Italiani di Microscopia a Forza Atomica (AFM)*, Rome (Italy), 23-24 February 2016.
18. *NanoItaly 2015*, Rome (Italy), 21-24 September 2015.
17. *TMS 2015*, Orlando (Florida, USA), 15-19 March 2015.
16. *NanoForum 2014*, Rome (Italy), 22-25 September 2014.
15. *The 4th International Symposium on Surface and Interface of Biomaterials (ISSIB) 2013*, Rome (Italy), 24-28 September 2013.
14. *NanoForum 2013*, Rome (Italy), 18-20 September 2013.
13. *NanotechITALY 2012*, Venice (Italy), 21-23 November 2012.
12. *Nanomedicine: from molecules to diagnosis and therapy*, Rome (Italy), 1-3 October 2012.
11. *NanoForum 2012*, Rome (Italy), 24-26 September 2012.
10. *International Conference on Mechanics of Nano, Micro and Macro Composite Structures (ICNMMCS 2012)*, Turin (Italy), 18-20 June 2012.
9. *Nanomateriali e salute*, Rome (Italy), 10-11 May 2012.
8. *Bio&medical sciences with new light sources*, Rome (Italy), 12-13 March 2009.
7. *EPS-CMD 22*, Rome (Italy), 25-29 August 2008.
6. *E-MRS 2007 Spring Meeting*, Strasbourg (France), 28 May - 1 June 2007.
5. *2007 ICU Wien*, Wien (Austria), 9-12 April 2007.
4. *E-MRS IUMRS ICEM 2006 Spring Meeting*, Nice (France), 29 May - 2 June 2006.
3. *Nanocose 3*, Rome (Italy), 3-5 October 2005.
2. *XX Congress of the International Union of Crystallography*, Florence (Italy), 23-31 August 2005.
1. *Metrologia per le nanotecnologie*, Turin (Italy), 12-13 May 2004.

Other coauthored communications at conferences [Oral communications](#) and [posters](#) which I coauthored:

68. *CHALLENGES - Real time nano CHAracterization relatEd techNoloGiEs*, poster at *E-MRS Spring Meeting*, Virtual Conference, 31 May - 4 June 2021.
67. L. Angeloni, M. Reggente, **D. Passeri**, M. Rossi, *Nanomechanical characterizations of biomaterials using atomic force microscopy*, oral contribution at *BioM&M*, Milan (Italy), 27-29 June 2018.
66. L. Angeloni, **D. Passeri**, M. Reggente, M. Natali, D. Mantovani, M. Rossi, *Magnetic force microscopy with controlled magnetization of the tip: toward truly quantitative nanomagnetometry*, oral contribution at *StSPM'16*, Bologna (Italy), 21 October 2016 (Book of Abstracts p. 33).

65. M. Reggente, M. Natali, **D. Passeri**, G. Pourroy, P. Masson, H. Palkowski, M. Rossi, A. Carradò, *Synthesis and nanomechanical characterization of hybrid Ti/PMMA materials for medical devices*, oral communication at *30th Conference of the European Colloid and Interface Society (ECIS 2016)*, Rome (Italy), 4-9 September 2016 (Book of Abstracts (Orals) O.106, p. 143).
64. L. Angeloni, V. Montañó-Machado, S. Turgeon, P. Chevallier, **D. Passeri**, M. Rossi, D. Mantovani, *Oxidation plasma treatment of fluorocarbon ultrathin films for cardiovascular applications*, poster at *30th Conference of the European Colloid and Interface Society (ECIS 2016)*, Rome (Italy), 4-9 September 2016 (Book of Abstracts (Posters) P2.13, p. 98).
63. M. Reggente, E. Tamburri, **D. Passeri**, M.L. Terranova, M. Rossi, *Conducting Polymers as candidate material for artificial muscles: an EC-AFM study*, poster at *30th Conference of the European Colloid and Interface Society (ECIS 2016)*, Rome (Italy), 4-9 September 2016 (Book of Abstracts (Posters) P2.116, p. 201).
62. E. Chiricozzi, L. Angeloni, M. Natali, **D. Passeri**, M. Rossi, M. Villani, *The nanomaterials and the new generation of electric motors*, poster at *7th International Conference Magnetism and Metallurgy WMM'16*, Rome (Italy), 13-15 June 2016.
61. E. Tamburri, G. Reina, S. Orlanducci, M.L. Terranova, **D. Passeri**, R. Matassa, M. Rossi, *Nanodiamonds and conducting polymers: a way towards new multifunctional platforms*, oral communication at *XI Convegno Nazionale Materiali Nanofasici*, Rome (Italy), 26-28 October 2015.
60. E. Tamburri, M. Reggente, M. Angjellari, A. Valguarnera, S. Orlanducci, **D. Passeri**, M. Rossi, M.L. Terranova, *Strategies for fabrication of innovative and highly biocompatible diamond electrodes*, poster at *IEEE NANO 2015*, Rome (Italy), 27-30 July 2015.
59. M. Reggente, **D. Passeri**, L. Angeloni, F. Scaramuzzo, F. De Angelis, M. Barteri, M. Rossi, *Atomic force microscopy techniques for the detection of nanomaterials incorporated in biological systems*, poster at *18-th International Microscopy Congress*, Prague (Czech Republic), 7-12 September 2014.
58. M. Reggente, **D. Passeri**, L. Angeloni, M. Rossi, E. Tamburri, S. Orlanducci, M.L. Terranova, *In situ characterization of the growth mechanism of PANI films with electrochemical atomic force microscopy*, poster at *18-th International Microscopy Congress*, Prague (Czech Republic), 7-12 September 2014.
57. L. Angeloni, **D. Passeri**, M. Reggente, C. Marianecci, D. Mantovani, M. Rossi, *Characterization of magnetic nanoparticles properties by magnetic force microscopy*, poster at *18-th International Microscopy Congress*, Prague (Czech Republic), 7-12 September 2014.
56. L. Angeloni, **D. Passeri**, M. Reggente, F. Pantanella, S. Schippa, D. Mantovani, M. Rossi, *Bacterial adhesion force measurements by microbial cell probe atomic force microscopy*, poster at *18-th International Microscopy Congress*, Prague (Czech Republic), 7-12 September 2014.
55. S. Irrera, **D. Passeri**, M. Reggente, M. Rossi, G. Portalone, *Self-assembly of the newly discovered DNA base 5 - carboxylcytosine on graphite*, oral communication at *XXV Congresso Nazionale della Società Chimica Italiana*, Arcavacata di Rende (Cosenza, Italy), 7-12 September 2014.
54. M.L. Terranova, S. Orlanducci, S. Gay, V. Guglielmotti, T. Lavecchia, G. Reina, E. Tamburri, R. Matassa, **D. Passeri**, M. Rossi, *Nanodiamond/conducting polymers: in search of best suited system for energetic applications*, oral communication at *International Conference Advanced Carbon Nanostructures ACNS 2013*, St. Petersburg (Russia), 1-5 July 2013.
53. C. Marianecci, F. Rinaldi, C. Ingallina, C. Dong, **D. Passeri**, A. Sorbo, M. Rossi, M. Carafa, *Multifunctional nanocarriers: MNPs loaded niosomes, preparation and characterization*, poster at *European Foundation for Clinical Nanomedicine (CLINAM) and the European Technology Platform on Nanomedicine (ETPN) Summit*, Basel (Switzerland), 23-26 June 2013.
52. **D. Passeri**, M. Rossi, E. Tamburri, V. Guglielmotti, S. Orlanducci, M.L. Terranova, *Atomic force microscopy as a tool for characterization of thermoacoustic nanostructured emitters at nanoscale*, poster at *NanotechITALY 2012*, Venice (Italy), 21-23 November 2012 (Digest p. 97).
51. C. Marianecci, F. Rinaldi, G. Baldi, **D. Passeri**, C. Dong, A. Sorbo, M. Rossi, M. Carafa, *Non ionic surfactant vesicles/MNPs as smart delivery system for theranostic applications: a preliminary evaluation*, poster at *The First NEMB Venice Workshop on "Cancer Nanotechnology"*, Venice (Italy), 11-12 October 2012.
50. C. Marianecci, F. Rinaldi, G. Baldi, **D. Passeri**, C. Dong, A. Sorbo, M. Rossi, M. Carafa, *MNPs in non ionic surfactant vesicles as smart delivery system for theranostic applications*, oral communication at *Nanomedicine: from molecules to diagnosis and therapy*, Rome (Italy), 1-3 October 2012 (Digest p. SL6).

49. **D. Passeri**, C. Dong, S. Corsetti, L. Angeloni, M. Rossi, F. Rinaldi, C. Marianecchi, M. Carafa, F. Pantanella, A. Sorbo, *Visualization and quantification of magnetic nanoparticles into vesicular systems by atomic force microscopy*, poster at *Nanomedicine: from molecules to diagnosis and therapy*, Rome (Italy), 1-3 October 2012 (Digest p. P20).
48. S. Orlanducci, E. Tamburri, V. Guglielmotti, I. Cianchetta, **D. Passeri**, R. Matassa, M. Rossi, M.L. Terranova, *Conducting polymers/nanodiamond composites: preparation and applications of unconventional nanofibers and fibril-like structures*, oral communication at *XL Congresso Nazionale della Divisione di Chimica Inorganica della Società Chimica Italiana*, Sestri Levante (Genova, Italy), 9-13 September 2012 (Digest p. 63).
47. A. Biagioni, M. Germano, T. Natale, **D. Passeri**, *Modi di vibrazione di strutture tensegrali capaci di modellizzare le deformazioni cellulari nei tessuti biologici*, oral communication at *39mo Convegno Nazionale dell'Associazione Italiana di Acustica*, Rome (Italy), 4-6 July 2012.
46. A. Biagioni, **D. Passeri**, C. Alippi, *Proprietà termoacustiche di agenti di contrasto per ultrasonografia medica*, oral communication at *39mo Convegno Nazionale dell'Associazione Italiana di Acustica*, Rome (Italy), 4-6 July 2012.
45. M.L. Terranova, E. Tamburri, V. Guglielmotti, F. Toschi, S. Orlanducci, **D. Passeri**, M. Rossi, *Conducting polymer/nanodiamond composites: New opportunities and scientific challenges for material science*, oral communication at *Times of Polymers and Composites*, Ischia (Italy), 10-14 June 2012.
44. E. Tamburri, V. Guglielmotti, S. Orlanducci, M.L. Terranova, **D. Passeri**, M. Rossi, D. Sordi, *Nanodiamond-triggered organization in fibers of PANI nanocomposites produced by chemical and electrochemical routes: Structural Features and Functional characterizations*, oral communication at *2012 MRS SPRING MEETING & EXHIBIT*, San Francisco (CA, USA), 9-13 April 2012.
43. S. Orlanducci, E. Tamburri, I. Cianchetta, D. Sordi, M.L. Terranova, **D. Passeri**, M. Rossi, *Nanodiamonds: hints for bio-technical applications*, oral communication at *CARBOMAT 2011 - Workshop on carbon-based low dimensional materials*, Catania (Italy), 5-7 December 2011.
42. R. Matassa, S. Orlanducci, V. Guglielmotti, D. Sordi, E. Tamburri, M. L. Terranova, **D. Passeri**, M. Rossi, *Self-assembling of graphitic nanoplatelets*, oral communication at *CARBOMAT 2011 - Workshop on carbon-based low dimensional materials*, Catania (Italy), 5-7 December 2011.
41. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Nonlinear behaviour of cell tensegrity models*, oral communication at *International Congress on Ultrasonics 2011 (ICU 2011)*, Gdansk (Poland), 5-8 September 2011.
40. M.L. Terranova, S. Orlanducci, E. Tamburri, V. Guglielmotti, D. Sordi, F. Toschi, R. Matassa, **D. Passeri**, M. Rossi, *Engineering nanodiamond-PANI nanocomposites: structural features and mutual arrangements*, oral communication at *Advanced Carbon Nanostructures ACN'2011*, St. Petersburg (Russia), 4-8 July 2011 (Digest p. 62).
39. S. Orlanducci, V. Guglielmotti, D. Sordi, E. Tamburri, M.L. Terranova, **D. Passeri**, M. Rossi, *Self-assembling of graphitic nanoplatelets*, poster at *Advanced Carbon Nanostructures ACN'2011*, St. Petersburg (Russia), 4-8 July 2011 (Digest p. 344).
38. A. Biagioni, A. Bettucci, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, A. Alippi, *Thermal dependence of ultrasound contrast agents scattering characteristics for echographic imaging techniques*, oral communication at *Forum Acusticum 2011*, Aalborg (Denmark), 27 June - 1 July 2011.
37. M. Germano, A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, **D. Passeri**, *Generation of a backward Lamb wave by means of mode conversion*, oral communication at *Forum Acusticum 2011*, Aalborg (Denmark), 27 June - 1 July 2011.
36. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Analisi agli elementi finiti delle non linearità delle strutture tensegrate*, oral communication at *38mo Convegno Nazionale dell'Associazione Italiana di Acustica*, Rimini (Italy), 8-10 June 2011.
35. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Misura della velocità di gruppo e di fase dell'onda di Lamb retrograda*, oral communication at *38mo Convegno Nazionale dell'Associazione Italiana di Acustica*, Rimini (Italy), 8-10 June 2011.
34. D. Sordi, S. Orlanducci, E. Tamburri, **D. Passeri**, M. Lucci, M.L. Terranova, *Nanocomposites constituted by thermotropic liquid crystal polymers and carbon nanotubes: self-organization and photoinduced charge transfer*, poster at *Frontiers in polymers science*, Lyon (France), 29-31 May 2011 (Digest p. P.3.053).
33. A.M. De Francesco, R. Scarpelli, M. Hatipoglu, **D. Passeri**, M. Rossi, F. De Zuane, D. Ajò, *Minerals and related artificial materials: the case of diaspore*, poster at *89mo Congresso della Società Italiana di Mineralogia e Petrologia (SIMP)*, Ferrara (Italy), 13-15 September 2010.

32. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Thermal behavior of ultrasound contrast agents for echographic imaging techniques through a photoacoustic technique*, poster at 1-st EAA - EuroRegio 2010, Ljubljana (Slovenia), 13-15 September 2010.
31. A. Bettucci, M. Germano, **D. Passeri**, *Nonlinear oscillating phenomena in finite piezo-electric structures*, oral communication at *Inter noise 2010*, Lisbon (Portugal), 13-16 June 2010.
30. D. Sordi, S. Orlanducci, F. Toschi, M.L. Terranova, M. Lucci, **D. Passeri**, *Thermotropic liquid crystal polymer filled with single wall carbon nanotubes: self-ordered system for photoinduced charge injection*, oral communication at *EUPOC 2010*, Gargnano Lago di Garda (Brescia, Italy), 30 May - 4 June 2010 (Digest p. 44).
29. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Studio preliminare del comportamento non lineare di agenti di contrasto per ecografia diagnostica mediante la tecnica di scattering a impulsi*, oral communication at 37mo Convegno Nazionale dell'Associazione Italiana di Acustica, Siracusa (Italy), 26-28 May 2010.
28. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Comportamento non lineare di strutture tensintegre*, oral communication at 37mo Convegno Nazionale dell'Associazione Italiana di Acustica, Siracusa (Italy), 26-28 May 2010.
27. A. Alippi, A. Bettucci, A. Biagioni, D. Conclusio, A. D'Orazio, M. Germano, **D. Passeri**, *Studio del comportamento termico di agenti di contrasto per ecografia diagnostica mediante un sistema fotoacustico*, oral communication at 37mo Convegno Nazionale dell'Associazione Italiana di Acustica, Siracusa (Italy), 26-28 May 2010.
26. F. Berlutti, F. Pantanella, A. Catizone, A. Frioni, T. Natalizi, M. Pietropaoli, **D. Passeri**, M. Rossi, P. Valenti, *Lactoferrin conjugated SiO₂ nanoparticles: a preliminary study on safety and efficacy*, poster at 3rd European Conference for Clinical Nanomedicine (CLINAM), Basel (Switzerland), 10-12 May 2010.
25. **D. Passeri**, S. Berezina, A. Bettucci, A. Biagioni, M. Rossi, A. Alippi, E. Tamburri, M. Lucci, I. Davoli, *Measurement of indentation modulus and hardness of poly(3,4-ethylene-dioxithiophene) PEDOT doped with poly(4-styrenesulfonate) (PSS) thin films by atomic force microscopy*, oral communication at 15-th Applied Physics of Condensed Matter (APCOM 2009), Liptovský Ján (Slovakia), 24-26 June 2009.
24. D. Sordi, V. Guglielmotti, S. Orlanducci, E. Tamburri, F. Toschi, M.L. Terranova, M. Lucci, **D. Passeri**, *Aligned single wall carbon nanotubes in thermotropic polymer liquid crystals: preparation and characterization*, poster at 15-th Workshop on Liquid Crystal Phases and Nano-Structures, Erice (Trapani, Italy), 27 October - 1 November 2008.
23. D. Sordi, V. Guglielmotti, S. Orlanducci, E. Tamburri, F. Toschi, M.L. Terranova, **D. Passeri**, *Preparation and characterization of aligned single wall carbon nanotube in thermotropic polymer liquid crystals*, poster at XXXVI Congresso Nazionale della Divisione di Chimica Inorganica della Società Chimica Italiana, Lecce (Italy), 1-5 September 2008 (Digest p. P12).
22. **D. Passeri**, A. Bettucci, M. Rossi, A. Alippi, S. Berezina, P. Anastasiadis, P. Zinin, *Indentation modulus and hardness of collagen fibers by AFM nanoindentation*, poster at EPS-CMD 22, Rome (Italy), 25-29 August 2008 (Digest p. 81).
21. A. Bettucci, A. Biagioni, A. D'Orazio, **D. Passeri**, *Periodic oscillations within chaotic region in finite piezoelectric structures*, oral communication at 18-th International Symposium on Nonlinear Acoustics (ISNA), Stockholm (Sweden), 7-10 July 2008.
20. A. Alippi, A. Biagioni, M. Germano, **D. Passeri**, *Pattern matching of harmonic vibrations in nonlinearly generated acoustic modes in bovine bone samples*, oral communication at 18-th International Symposium on Nonlinear Acoustics (ISNA), Stockholm (Sweden), 7-10 July 2008.
19. A. Biagioni, A. Alippi, A. Bettucci, A. D'Orazio, M. Germano, **D. Passeri**, *Photoacoustic evaluation of thermal response of microbubbles*, poster at Acoustics'08 Paris, Paris (France), 29 June - 4 July 2008 (J. Acoust. Soc. Am. 123, p. 3220 (2008), DOI: 10.1121/1.2933418).
18. F. Toschi, E. Tamburri, V. Guglielmotti, M.L. Terranova, A. Reale, A. Di Carlo, **D. Passeri**, M. Rossi, C. Falessi, A. Fiorello, R. Buttiglione, *Preparation and thermal characterization of carbon nanotubes-based composites for applications in electronics packaging*, oral communication at ICQNM 2008, Sainte Luce (Martinique), 10-15 February 2008.
17. A. Alippi, A. Bettucci, A. Biagioni, J.A. Gallego, **D. Passeri**, E. Riera, *Non linear down-frequency conversion effects in high intensity vibration of plate transducers and piezoelectric structures*, oral communication at 19-th International Congress on Acoustics (ICA) 2007, Madrid (Spain), 2-7 September 2007 (Digest p. 229).
16. **D. Passeri**, M. Rossi, A. Alippi, A. Bettucci, M.L. Terranova, E. Tamburri, F. Toschi, *Characterization of epoxy/single-walled carbon nanotubes composite samples via atomic force acoustic microscopy*, poster at E-MRS 2007 Spring Meeting, Strasbourg (France), 28 May - 1 June 2007 (Digest p. M-11).

15. **D. Passeri**, M. Rossi, A. Alippi, A. Bettucci, D. Manno, A. Serra, E. Filippo, *Atomic force acoustic microscopy characterization of nanostructured Selenium-Tin mixed oxide thin films*, poster at *E-MRS 2007 Spring Meeting*, Strasbourg (France), 28 May - 1 June 2007 (Digest p. K-4).
14. A. Serra, D. Manno, A. Tepore, S. Orlanducci, V. Sessa, E. Tamburri, F. Toschi, M.L. Terranova, **D. Passeri**, M. Rossi, *Photo-induced current in single-wall carbon nanotubes bundles investigation*, poster at *ICNTE Workshop*, Bologna (Italy), 24-25 May 2007.
13. A. Albolino, S. Orlanducci, **D. Passeri**, M. Rossi, M.S. Sarto, A. Tamburrano, E. Tamburri, F. Toschi, *Electromagnetic shielding performances of composites loaded with swcnts by arc-discharge and laser-based techniques*, poster at *ICNTE Workshop*, Bologna (Italy), 24-25 May 2007.
12. A. Biagioni, A. Bettucci, C. Guiot, R. Cavalli, **D. Passeri**, *Ultrasonic characterization of chitosan-based microbubbles containing CO₂*, poster at *2007 ICU Wien*, Wien (Austria), 9-12 April 2007 (Digest p. 85).
11. A. Alippi, A. Bettucci, A. Biagioni, M. Germano, **D. Passeri**, *Energy field distribution in harmonic generation of acoustic modes in finite structures*, oral communication at *2007 ICU Vienna*, Wien (Austria), 9-12 April 2007 (Digest p. 117).
10. **D. Passeri**, A. Bettucci, A. Alippi, A. Belardini, F. Michelotti, A. Rousseau, A. Ratsimihety, *Electro-optic and electro-mechanical response of side-chain copolymers: a comparative study on the chromophore concentration dependence*, oral communication at *8-th European Conference on Applications of Polar Dielectrics (ECAPD8)*, Metz (France), 5-8 September 2006 (Digest p. 58).
9. A. Belardini, **D. Passeri**, M.C. Larciprete, G. Schoer, A. Rousseau, F. Michelotti, *Use of sandwich structures with ZnO:Al transparent electrodes for the measurement of the electro-optic properties of standard and fluorinated poled polymers at $\lambda=1.55 \mu\text{m}$* , oral communication at *I Conference on Advances in Optical Materials*, Tucson (Arizona, USA), 12-15 October 2005.
8. E. Tamburri, S. Orlanducci, A. Fiori, M.L. Terranova, V. Sessa, F. Brunetti, P. Regoliosi, M. Lucci, **D. Passeri**, M. Rossi, *New systems based on carbon nanotubes-polymer composites for advanced applications*, poster at *Nanocose 3*, Rome (Italy), 3-5 October 2005 (Digest p. 49).
7. **D. Passeri**, A. Alippi, A. Bettucci, M. Germano, G. Zollo, M. Rossi, E. Tamburri, S. Orlanducci, M.L. Terranova, *Local elastic measurement in nanostructured materials via Atomic Force Acoustic Microscopy technique*, poster at *Nanocose 3*, Rome (Italy), 3-5 October 2005 (Digest p. 59).
6. E. Tamburri, S. Orlanducci, A. Fiori, M.L. Terranova, V. Sessa, F. Brunetti, P. Regoliosi, M. Lucci, **D. Passeri**, M. Rossi, *New systems based on carbon nanotubes-polymer composites for advanced applications*, poster at *V Convegno Nazionale sulla Scienza e Tecnologia dei Materiali*, Geremeas - Maracalagonis (Cagliari, Italy), 26-29 September 2005 (Digest p. H25).
5. F. Marinozzi, F. Bini, **D. Passeri**, A. Grandoni, *AFM characterization of 1-3 Piezocomposite Arrays*, poster at *2005 IEEE International Ultrasonics Symposium*, Rotterdam (The Netherlands), 18-21 September 2005 (Digest pp. 343-344).
4. A. Alippi, A. Bettucci, M. Germano, **D. Passeri**, *Harmonic and subharmonic acoustic wave generation in finite structures*, oral communication at *World Congress on Ultrasonics/Ultrasonics International (WCU/UI '05)*, Beijing (China), 28 August - 1 September 2005.
3. **D. Passeri**, A. Alippi, A. Bettucci, M. Germano, G. Zollo, M. Rossi, E. Tamburri, S. Orlanducci, M.L. Terranova, *Local elastic measurement in nanostructured materials via Atomic Force Acoustic Microscopy technique*, poster at *XX Congress of the International Union of Crystallography*, Florence (Italy), 23-31 August 2005 (Digest p. C452).
2. **D. Passeri**, A. Alippi, A. Bettucci, M. Rossi, E. Tamburri, S. Orlanducci, A. Fiori, M.L. Terranova, *AFM and STM morphological characterisation of carbon nanotubes/conducting polymers composites*, poster at *X Scuola Nazionale di Scienza dei Materiali*, Sestri Levante (Genova, Italy), 27 September - 8 October 2004.
1. **D. Passeri**, M.C. Larciprete, A. Belardini, S. Paoloni, C. Sibilia, A. Passaseo, F. Michelotti, *Characterisation of the nonlinear coefficients of AlGaIn/GaN crystalline thin films via SHG measurement*, poster at *International School of Quantum Electronics 39-th Course*, Erice (Trapani, Italy), 18-25 October 2003.

Supervisor of student thesis and fellows

I have been the supervisor of the thesis of the following students:

PhD students

4. **Luca Buccini** - (Cycle: XXXVIII)
3. **Anacleto Proietti** - PhD thesis title: *Ottimizzazione di Processi Tecnologici Critici per Dispositivi GaN HEMT ad Alte Prestazioni ed Alta Affidabilità (GaNAPA)* Dottorati Industriali Regione Lazio (Cycle: XXXVII)
2. **Calwin Joby Kundukulam** - PhD thesis title: *Termografia ad alta risoluzione spaziale per lo studio del comportamento termico di dispositivi GaN-HEMT per l'elettronica per la transizione ecologica (TermoGan)* Programme PON R&I (Cycle: XXXVII) - discontinued
1. **Carlotta Santilli** - PhD thesis title: *Caratterizzazione e analisi dell'affidabilità dei dispositivi elettronici di potenza, basati su GaN-HEMT, per applicazioni legate all'efficientamento energetico (ReliGaN)* Programme PON R&I (Cycle: XXXVII)

Graduate students

6. **Syed Munir Azeem** - MSc thesis title: *Growth and optimization of low-stress and low-optical-loss silicon oxides and nitrides thin films by PECVD method and DUV-MIR spectroscopic ellipsometry study* (AY: 2021)
5. **Deelip Kumar Rangala** - MSc thesis title: *Plasmonic techniques in scanning probe microscopy* (AY: 2021)
4. **Mousa Ali Mousa Al Rbaieh** - MSc thesis title: *AFM measurements for process control of EBL nanofabrication* (AY: 2021)
3. **Sijo Joseph** - MSc thesis title: *Piezoresponse force microscopy for characterization of piezoelectric materials* (AY: 2021)
2. **Akshay Nadimetla** - MSc thesis title: *Kelvin probe force microscopy for the characterization of materials at the nanoscale* (AY: 2021)
1. **Priyadarshini** - MSc thesis title: *Calibration of scanning Kelvin probe microscopy for the characterization of work function at the nanoscale* (AY: 2020)

Co-supervisor of student thesis and fellows

I have been the co-supervisor of the thesis of the following students:

Graduate students

2. **Taljinder Singh** - MSc thesis title: *Dalla cellulosa alla nanocellulosa: caratterizzazioni e applicazioni nell'agricoltura ecosostenibile* (AY: 2019)
1. **Giancarlo La Penna** - MSc thesis title: *AFM-based techniques for the nondestructive characterization in microelectronic devices down to the nanoscale* (AY: 2019)

I have supervised the experimental research activity of the following students and fellows at the Scanning Probe Microscopy Laboratory of *Electron Microscopy and Nanoscopies (EMiNa)* research group (team leader Prof. Marco Rossi) and at the Acoustical Physics Laboratory (team leader Prof. Adriano Alippi), Department of Basic and Applied Sciences for Engineering, SAPIENZA University of Rome, Italy:

PhD students

3. **Melania Reggente** - PhD thesis title: *Design and advanced characterization of PMMA-coated Ti surfaces for biomedical application* (AY: 2016/17)
2. **Livia Angeloni** - PhD thesis title: *Development of new AFM based methodologies for the quantitative magnetic characterization of nanoparticles for biomedical applications* (AY: 2015/16)
1. **Chunhua Dong** - PhD thesis title: *Scanning probe microscopies for the study at nanoscale of nanomaterials and nanosystems* (AY: 2012/13)

Graduate students

5. **Marco Natali** - MSc thesis title: *Caratterizzazione meccanica alla nanoscala di materiali morbidi al variare della temperatura mediante microscopia a forza atomica* (AY: 2014/15)
4. **Melania Reggente** - MSc thesis title: *Atomic Force Microscopy techniques for the characterization of polymeric films* (AY: 2012/13)
3. **Stella Corsetti** - MSc thesis title: *Studio mediante microscopia a forza atomica e magnetica di nanoparticelle per applicazioni biomedicali* (AY: 2011/12)

2. **Livia Angeloni** - MSc thesis title: *Studio mediante tecniche di microscopia a scansione di sonda di nanoparticelle magnetiche per applicazioni biomedicali* (AY: 2010/11)
1. **Davide Conclusio** - MSc thesis title: *Caratterizzazione morfologica e meccanica di polimeri e materiali biologici mediante tecniche di microscopia a forza atomica* (AY: 2007/08)

Undergraduate students

3. **Ugo Sassi** - BSc thesis title: *Microscopia a forza atomica: studio preliminare dell'effetto termoacustico di film di nanotubi di carbonio* (AY: 2008/09)
2. **Marco Soldati** - BSc thesis title: *Implementazione della tecnica di nanoindentazione statica mediante microscopia a forza atomica per la determinazione del modulo di Young di materiali polimerici* (AY: 2006/07)
1. **Francesco Conforti** - MSc thesis title: *Microscopia a sonda per l'analisi delle proprietà meccaniche su scala nanometrica* (AY: 2006/07)

RESEARCH PROJECTS

I have been the proposer, the principal or the sole investigator, the scientific responsible or coordinator of the project and/or of a single Research Unit of the following funded research projects:

- | | |
|--------------|---|
| 2023 – 2025 | <p><i>Electro- and Photoelectro-chemical CO₂ conversion in eXtreme environments (EPiCX)</i></p> <p>PRIN: Progetti di Ricerca di Rilevante Interesse Nazionale - Bando 2022 - Numero protocollo: 2022Z8RM7C</p> <p>Global cost: 253 keuro; Cost of the Research Unit: 80 keuro; Grant to the Research Unit: 54 keuro</p> <p>Role: Responsible of the Local Research Unit of Sapienza University of Rome</p> |
| 2021 – 2024 | <p><i>Advanced Magnetic and Electric Nanoscale Scanning probe methods (MENS)</i></p> <p>Granted by SAPIENZA University of Rome, Progetti di Ricerca (Piccoli, Medi) - Progetti Medi - Numero protocollo: RM12117A81FD8EE0</p> <p>Global cost: 14.3 keuro</p> <p>Role: Proposer, scientific responsible, and coordinator</p> |
| 2020 – 2023 | <p><i>A preliminary Study Towards A circular Green-use of Eco-friendly barrier masks for SARS-CoV-2 protection: production, use, decontamination, reuse and recycling (STAGES)</i></p> <p>Granted by SAPIENZA University of Rome, Progetti di Ricerca (Piccoli, Medi) - Progetti Medi - Numero protocollo: RM120172B479E2E8</p> <p>Global cost: 11.0 keuro</p> <p>Role: Proposer, scientific responsible, and coordinator</p> |
| 2020 | <p><i>Professori Visitatori per Attività di Ricerca 2020 - Visiting Professor Prof. Andrzej Sikora</i></p> <p>Granted by SAPIENZA University of Rome, Finanziamenti per Professori Visitatori per Attività di Ricerca 2020 - Numero protocollo: C26V20ALAM</p> <p>Global cost: 5.0 keuro</p> <p>Role: Proposer and scientific responsible</p> |
| 2020 | <p><i>NANOINNOVATION 2020, Conference and Exhibition</i></p> <p>Granted by SAPIENZA University of Rome, Finanziamenti per convegni, seminari, workshop - Numero protocollo: CC11916B8624D3B3</p> <p>Global cost: 1.6 keuro</p> <p>Role: Proposer and scientific responsible</p> |
| 2020 – today | <p><i>NANOFAB fase II - Contratto di consulenza per Klopman International Srl</i></p> <p>Granted by MISE</p> <p>Cost of the contract: 12 keuro</p> |

Role: **Scientific responsible** of the research designed by Research Center for Nanotechnology applied to Engineering of Sapienza University of Rome (CNIS)

2012 *Imaging of carbon-based nanomaterials in biological systems by torsional harmonic atomic force microscopy and atomic force acoustic microscopy*
 Granted by SAPIENZA University of Rome, call Avvio alla Ricerca 2012 - Prot. C26N12XAHF
 Global cost: 2 keuro
 Role: Proposer and sole investigator

I have participated as member of the investigating group receiving a specific appointment or scientific responsibility/coordination to the following funded research projects:

2022 – today *European Innovative GaN Advanced Microwave Integration (AGAMI_EURIGAMI)*
 Granted by European Defence Fund (EDF) 2021 - Call: EDF-2021-MATCOMP-R-2 - Grant number: 101102983 - AGAMI_EURIGAMI
 Global cost: **** keuro
 Role: **Work Package Leader** of the *Work Package 10: Package robustness against environmental threats*

2020 – today *Real-time nano-CHARacterization reLatEd techNloGiEeS (CHALLENGES)*
 Granted by EU H2020 Programme - Call: H2020-NMBP-TO-IND-2019 - Grant number: 861857-CHALLENGES
 Global cost: 4600 keuro
 Role: **Project Risk Manager** and **Work Package Leader** of the *Work Package 2: Development of clean room compliant tips*

I have participated as member of the investigating group to the following funded research projects:

2020 – today *Advanced Platform for nanoscale Electrochemical Synthesis and Characterizations based on Atomic Force Microscopy (PESCA) as tool of visualization at high spatial resolution*
 Granted by SAPIENZA University of Rome, Grandi Attrezzature Scientifiche - Grandi Attrezzature - Numero protocollo: GA120173054F048C
 Global cost: 316 keuro

2019 – today *Caratterizzazione di nanomateriali per sensori di gas tossici da realizzare su tessuti indossabili*
 Granted by SAPIENZA University of Rome, Progetti di Ateneo (Progetti di Ricerca PICCOLI) - Numero protocollo: RP11916B85E71F6F
 Global cost: 4 keuro

2018 – today *Strain characterization via Tip-enhanced Raman spectroscopy in micro- and nano- Electronic Strain-engineered Systems and devices (STRESS)*
 Granted by SAPIENZA University of Rome, Progetti di Ateneo (Progetti H2020) - Numero protocollo: PH1181643625A638
 Global cost: 26 keuro

2018 – today *NEMESI - Nanotecnologie chimiche green per la protezione Sostenibile delle piante*
 Granted by MIUR - PON 'Ricerca e Innovazione' 2014-2020 - Ref. ARS01_01002
 Global cost: 4036 keuro; Cost of the Research Unit: 190 keuro; Grant to the Research Unit: 95 keuro

2018 – today *Advanced Tomography and Microscopies (ATOM)*
 Granted by Regione Lazio - Infrastrutture Aperte per la Ricerca - Ref. 91703-0140-0173
 Global cost: 2500 keuro

- 2017 – 2018** *Nanotechnology in agri/food/feed products*
 Granted by European Food Safety Authority (EFSA) - Competition and contract reference RC/EFSA/SCER/2016/01
 Global cost: 185.9 keuro
- 2017 – today** *Liquidi ionici di-cationici per applicazioni in chimica organica e in elettronica organica: sintesi, caratterizzazione e studi elettrochimici*
 Granted by SAPIENZA University of Rome, Progetti di Ateneo (Progetti di Ricerca MED) - Numero protocollo: RM11715C7C8F258C
 Global cost: 12 keuro
- 2016 – 2018** *Engineered magnetic nanoparticles for bio-related applications: modeling, fabrication, characterization and testing*
 Granted by SAPIENZA University of Rome, Progetti di Ateneo (Progetti di Ricerca MED) - Numero protocollo: RM11615505D09DB5
 Global cost: 15 keuro
- 2012 – 2014** *ADIMENA - Assemblaggio di dispositivi a microonde sia per brasatura con lega eutettica sia per incollaggio con materiali nano strutturati per applicazioni di apparati trasmissivi*
 Granted by Regione Lazio, call 2012 Co-Research, supported in the framework POR FESR Lazio 2007/13 - Ref. FILAS-CR-20 11-1110
 Global cost: 341 keuro
- 2012 – 2014** *TOMOSEM - Developing of a tomographic system for Scanning Electron Microscopy*
 Granted by Regione Lazio, call 2012 Co-Research, supported in the framework POR FESR Lazio 2007/13 - Ref. FILAS-CR-20 11-1110
 Global cost: 412 keuro
- 2010 – 2013** *SENSATIONAL - Fabrics integrated with gas nanosensors for personal protective equipment production*
 Call Industria 2015 - Made in Italy, granted by Ministry of Economic Development (prot. MI01_00070, 01.09.2010 - 30.08.2012)
 Global cost: 6.218 keuro; Cost of the Local Research Unit: 239 keuro
- 2010 – 2012** *Advanced nanomaterials and nanostructures for field- and photo-emission based devices*
 Call PRIN (Projects of Relevant National Interest) 2008 under the coordination of prof. Luigi Palumbo, granted by MIUR
 Global cost: 134 keuro; Cost of the Local Research Unit: 58 keuro
- 2008 – 2011** *NANORAY for the realization of X-rays sources based on carbon nanotubes*
 Call FP7-SME-2007 - Grant Agreement N. 222426: 11.11.2008 - 30.01.2011, granted by EU
 Global cost: 1.467 keuro; Cost of the Local Research Unit: 238 keuro

ACTIVITY AS PROFESSIONAL EXPERT

I have produced the following technical reports as expert:

27. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotici (Testicolo, epididimo e funicolo spermatico)*, 15 October 2021.
26. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotici (linfonodo latero cervicale dx)*, 09 September 2021.
25. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotici (Lobo sx tiroide)*, 29 November 2020.
24. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotici (Biopsia osteomidollare)*, 10 July 2020.

23. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Osteomidollo), 03 June 2020.*
22. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Tiroide lobo dx), 30 May 2020.*
21. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Angolo ponto-cerebellare (APC) dx), 06 March 2020.*
20. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Fegato), 12 November 2019.*
19. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Rene), 25 October 2019.*
18. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Colon dx), 03 October 2019.*
17. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Neoformazione polmonare sx), 20 September 2019.*
16. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Colon), 10 September 2019.*
15. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Osteomidollo), 25 July 2019.*
14. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Pancreas), 25 April 2019.*
13. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Campione biotptico non indicato), 23 April 2019.*
12. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Nevo dorso superiore; Nevo guancia dx), 22 April 2019.*
11. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Fegato), 28 March 2019.*
10. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Testicolo monolaterale sx), 16 March 2019.*
9. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Tiroide: lobo di destra; Tiroide: lobo di sinistra; Linfonodi compartimento centrale), 15 February 2019.*
8. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Linfonodo inguine dx), 19 January 2019.*
7. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Lobo polmonare dx), 06 December 2018.*
6. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Pancreas posteriore), 22 November 2018.*
5. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Tonsilla palatina dx), 12 November 2018.*
4. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Tiroide), 24 October 2018.*
3. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Campione biotptico non indicato), 24 October 2018.*
2. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Osteomidollo), 11 October 2018.*
1. *Relazione sulle analisi mediante tecniche di microscopia elettronica a scansione condotte su campioni biotpci (Lobo tiroideo dx), 26 September 2018.*

Faithfully

Daniele Passeri

