GIUSEPPE TOMASSETTI
CURRICULUM VITAE

Personal information

- Current position: Full Professor of Structural Mechanics (since November 1, 2024).
- Address: Department of Industrial, Electronic and Mechanical Engineering, Roma Tre University, Via della Vasca Navale 79/81, 00146 Rome, Italy.
- Email: giuseppe.tomassetti@uniroma3.it
- ORCiD: https://orcid.org/0000-0001-8801-7461
- Previous positions: Assistant Professor of Structural Mechanics, University of Rome "Tor Vergata" from 2002 until January 2017.

Education

- Ph.D. in Structural Engineering, obtained in 2002 at the University of Rome "Tor Vergata"
- Master's degree (summa cum laude) in Electronic Engineering, obtained in 1997 at the University of Rome "Tor Vergata".
- Master's degree (summa cum laude) in Mathematics, obtained in 2005 at the University of Rome "Tor Vergata".

Professional qualifications

Scientific qualifications

- National Scientific Qualification (Abilitazione Scientifica Nazionale) for Full Professor (I fascia) in the competitive sector 08/B2 Structural Mechanics, obtained on March 28, 2017 (first quarter of the 2016-18 round).
- National Scientific Qualification (Abilitazione Scientifica Nazionale) for Full Professor (I fascia) in the competitive sector 01/A4 Mathematical Physics, obtained on November 9, 2020 (fifth quarter of the 2018-20 round).

Other professional qualifications

- Professional Engineering License, obtained in 1997.
- Qualification to teach in Secondary School for Mathematics and Physics, obtained in 2001.

Awards and recognitions for scientific activity

- AIMETA Junior Award for Solid Mechanics, obtained in 2011

Research activity at public and private institutions, Italian and foreign

Research activity at Italian universities

- 2002-2017 Research activity as Assistant Professor at the University of Rome "Tor Vergata" in the Department of Civil Engineering and subsequently in the Department of Civil Engineering and Computer Engineering.
- 2017 - 2024 Research activity as Associate Professor at Roma Tre University, in the Department of Engineering and in the Department of Industrial, Electronic and Mechanical Engineering.

Research activity at qualified foreign universities and research institutions or supra-national

1. Research activity as "Visiting Scholar" at the Mathematics Department of Carnegie Mellon University, Pittsburgh, PA, USA, from August 11 to December 20, 2000.

   Collaboration with Morton Gurtin on problems of evolution of phase interfaces.

1. Research activity at: Faculty of Mathematics and Physics, Charles University, Prague, from December 11 to 16, 2006.

   Research conducted in collaboration with Tomas Roubicek on the thermodynamics of micromagnetics continua.

2. Research activity at: Faculty of Mathematics and Physics, Charles University, Prague, from September 13 to 20, 2007.

   Research conducted in collaboration with Tomas Roubicek on the thermodynamics of micromagnetics continua, co-financed by the project: Czech Science Foundation project 201/06/0352 (2006-8) "Incompressible fluids with advanced rheologies", principal investigator prof.RNDr. J.Malek DSc.

3. Research activity from March 1 to June 30, 2008 at FZU - Institute of Physics of the Czech Academy of Sciences.

   Research on ferromagnetic materials and shape memory materials in collaboration with the group of Dr. Petr Sittner and with Prof. Tomas Roubicek, carried out on the FP6-European project MRTN-CT-2004-505226 MULTIMAT (2004-2008) (coordinator Dominique Schryvers, Antwerp, and unit coordinator Petr Šittner).

4. Research activity at: Charles University (Prague), from April 28 to May 16, 2011.
   Research funded by the project: Czech Science Foundation project 201/09/0917 (2009-13), "Mathematical and computer analysis of the evolution processes in nonlinear viscoelastic fluid-like materials" (Principal Investigator prof.RNDr. J.Malek, DSc). Research on hysteresis phenomena in ferromagnetic materials in collaboration with Prof. Tomas Roubicek.

5. Research activity from June 3 to 16, 2013 at: Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering, Mechanical Engineering Department "Department of Mechanical Engineering at COPPE", Federal University of Rio de Janeiro.

   Research conducted in collaboration with Fernando Pereira Duda.

6. Research activity at the "MIT Mechanical Engineering Department", Massachusetts Institute of Technology, Boston - MA, USA, from March 1 to April 2, 2015.

   Scientific collaboration with Prof. Rohan Abeyaratne on surface accretion problems.

7. Research activity at: *Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering, Mechanical Engineering Department "Department of Mechanical Engineering at COPPE", Federal University of Rio de Janeiro*, from October 26 to November 28, 2015

   Research conducted in collaboration with Fernando Pereira Duda (Federal University of Rio de Janeiro).

8. Research activity at the *Mathematics Department, National University of Ireland at Galway*, from March 29 to April 12, 2019.

   Research on accretion problems, conducted in collaboration with Giuseppe Zurlo. Visit upon invitation from Prof. Michel Destrade.

9. Research activity as "Expert" at the *"Centre of Excellence for Nonlinear Dynamic Behaviour of Advanced Materials in Engineering" (CeNDYNMAT)* established at the *"Institute of Thermomechanics of the Czech Academy of Science",* from September 6 to 16, 2021.

   Visit funded by: *"European Structural and Investment Funds, Operational Programme Research, Development and Education of the European Union"*. Coordinator: Ing. Dusan Gabriel.

10. Research activity as "Professorial Research Fellow" at the University of Vienna, from February 28 to March 28, 2022, upon invitation from Prof. Ulisse Stefanelli.

    Mathematical modeling of surface growth phenomena, in collaboration with Elisa Davoli (TU Wien), Katerina Nik and Ulisse Stefanelli Universität Wien.

11. Research activity at the research institute: Institute of Information Theory and Automation of the Czech Academy of Sciences. Periods: from April 11 to 18, 2023, from August 14 to 18, 2023, and from March 17 to 23, 2024.

    The activity concerned problems of homogenization of magnetorheological elastomers and was conducted in collaboration with Dr. Martin Kružík (researcher at UTIA), Dr. Stefan Kroemer (researcher at UTIA) and Raffaele Grandi (postdoc at UTIA). The activity was funded by the project: "Scales and shapes in continuum thermomechanics", funded by: The Czech Science Foundation (GACR) and Austrian Science Fund (FWF), coordinated by Martin Kružík and Ulisse Stefanelli (Vienna).

12. Research activity at: Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering, Mechanical Engineering Department, Federal University of Rio de Janeiro (COPPE/UFRJ), from May 2 to 12, 2023.

    Research conducted as a visitor upon invitation from Prof. Fernando Pereira Duda, for the study of chemo-active thin structures.

13. Research activity at: Okinawa Institute of Science and Technology Graduate School, Okinawa, Japan, from May 23 to June 6, 2023.

    Research conducted as a visitor, upon invitation from Prof. Eliot Fried, for the study of plates whose possible deformations are conformal maps.

Scientific communications

Participation as speaker at congresses, conferences, workshops and national and international meetings

1. Speaker at the conference "WASCOM 99" - 10th Conference on Waves and Stability in Continuous Media, Vulcano, June 7 – 12, 1999.

Title of the talk: “Waves in Electroelastic Plates”.

2. Speaker at the Scientific Meeting of the Cofin project “Mathematical Models for Materials Science”, Casa dell’Università di Padova - Bressanone, January 25-28, 2000.

   Title of the talk: “Onde di spessore: modelli bi- e tridimensionali a confronto”.

3. Speaker at the first “Colloquium Lagrangianum”, Palazzo dei Duchi di S. Stefano, Taormina, November 6-9, 2000.

   First edition of the conference of researchers from the Italian-French research group “Laboratorio Lagrange” (CNR, University of Rome Tor Vergata, University of Montpellier, Laboratoire central des ponts et chaussées École nationale des ponts et chaussées). Proceedings published in the volume “Novel Approaches in Civil Engineering”, Springer 2004 (publication [C1]).

4. Speaker at the mid-term Scientific Meeting of the Cofin Project “Mathematical Models for Materials Science”, Casa dell'Università di Padova - Bressanone, December 13-15, 2001.
   Title of the talk: “Motion of domain walls in ferromagnetic materials”.

5. Speaker at the VI National Congress of SIMAI - Società Italiana di Matematica Applicata ed Industriale, May 27-31, 2002, Chia Laguna, Cagliari.

   Title of the talk: “On the Motion of Curved Domain Walls in a Ferromagnetic Body”.

6. Speaker at the third “Colloquium Lagrangianum”, Ravello, November 6-9, 2002.

   Title of the talk: “Surface tension and viscous drag effects on the motion of magnetic domain walls”

7. Speaker at the XVII Congress of the Italian Mathematical Union, Milan, September 8-13, 2003. Title of the talk: "Evolution equations of a domain wall in a rigid ferromagnetic body".

8. Speaker at the conference "40th Annual Technical Meeting Society of Engineering Science", Ann Arbor (MI, USA), October 12-15, 2003.

   Title of the talk: "Motion by curvature of magnetic domain walls”.

9. Speaker at the fifth “Colloquium Lagrangianum”, Venice, December 4-7, 2004.

   Title of the talk: “Existence of solution for a non–local viscoplasticity model”.

10. Speaker at the Assemblea Scientifica del Gruppo Nazionale di Fisica Matematica (Istituto Nazionale di Alta Matematica), Montecatini Terme, April 6-8, 2006.

    Title of the talk: "A mathematical model of peeling processes, viewed as propagation of a phase boundary".

11. Speaker at the sixth “Colloquium Lagrangianum”, Scilla, December 7–10, 2006.

    Title of the talk: “Derivation of the Reissner-Mindlin plate theory via gamma convergence”.

12. Speaker at the conference "44th Technical Meeting of the Society of Engineering Science", Texas A&M University, College Station (TX, USA), October 21-24, 2007.

    Title of the talk: "On a nonisothermal version of the Gilbert equation".

13. Speaker at the meeting “MULTIMAT meeting”, Rome, April 2-4, 2008.[1]

    Title of the talk: “Coupling dynamic micromagnetics with the heat equation”

[1] Meeting organized within the Marie Curie Research Training Network on Multi-scale modelling and characterisation for phase transformations in advanced materials (MULTIMAT) 2004-2008.

14. Speaker at the conference "Geometry, Continua and Microstructures" (8th edition), Catania, October 10-12, 2008.[2]

    Title of the talk: "Continuum Modeling of the Ferro/Paramagnetic Transition in Ferromagnets".

15. Speaker at the "Final Meeting" of the (INTAS Project - International Association for the promotion of cooperation with scientists from the independent states of the former Soviet Union) "Some Nonclassical Problems For Thin Structures", Rome, January 22-23, 2009.

    Title of the talk: "Derivation of beam and plate theories from three-dimensional from micropolar elasticity".

16. Speaker at the conference "ACE'09 – 5th Workshop on Advanced Computational Electromagnetics", Accademia dei Lincei - Rome, Palazzo Corsini, January 12–14, 2009.[3]

    Title of the talk: "Continuum Mechanics and Micromagnetics".

17. Speaker at the conference "COMPLAS X - International Conference on Computational Plasticity", Barcelona, September 2-4, 2009.

    Title of the talk:"Analysis of a model for shape-memory alloys at large strains accounting for electric conduction".

18. Speaker at the XIX Congress of AIMETA - Associazione Italiana di Meccanica Teorica e Applicata, Ancona, September 14-17, 2009.

    Title of the talk: "A model for shape-memory alloys accounting for electric conduction".

19. Speaker at the conference GMA (Gruppo Materiali AIMeTA - Associazione Italiana di Meccanica Teorica e Applicata), Udine, February 23-25, 2011.

    Title of the talk: "Torsion of cylindrical bars in Gradient Plasticity".

20. Invited speaker at the XX Congress of AIMeTA - Associazione Italiana di Meccanica Teorica e Applicata, Bologna, September 12-15, 2011.

    Title: "Justification of elementary structural theories starting from non-simple constitutive models". Talk given on the occasion of the conferral of the AIMeTA Junior Award 2011 for Solid Mechanics.

21. Talk at the XX Congress of AIMeTA - Associazione Italiana di Meccanica Teorica e Applicata, Bologna, September 12-15, 2011.

    Title: "On configurational forces in linear beam theory".

22. Speaker at the "Workshop on Advances in the Science of Solid and Engineering Mechanics" at SISSA-Scuola Internazionale Superiore di Studi Avanzati, Trieste, October 10-12, 2011.[4]

    Title of the talk: "Energetic solutions of the torsion problem in strain-gradient plasticity".

23. Speaker at the conference "Chinese-Italian Bilateral Meeting on Mechanics" held on August 28 and 29, 2012 at the City University of Hong Kong.[5]

    Title of the talk: "On Korn' s constant for thin cylindrical domains".

[2] Reference: https://web.archive.org/web/20240429154318/http://www.agenda.unict.it/open_page.php?sez=articolo&id=1922.
[3] Details: https://www.lincei.it/sites/default/files/632_invito_0.pdf.
[4] Reference:
https://web.archive.org/web/20240429162358/https://people.sissa.it/~desimone/Conferences/ManifestoSNP.pdf.
[5] Conference promoted by the Scientific, Technological and Industrial Office of the Italian Embassy in Beijing, with 16 speakers in the program.

24. Speaker at the XX National Conference on Computational Mechanics - VII Meeting of the Materials Group of AIMeTA - Associazione Italiana di Meccanica Teorica e Applicata, Cassino, June 11-13, 2014.

    Title of the talk: “Morphoelastic Rods”.

25. Speaker at the conference “Variational Methods in Solid Mechanics”. University of Udine, September 22-24, 2014.[6]

    Title of the talk: “Dissipative size effects in strain-gradient plasticity: the case of simple shear”.

26. Speaker at the conference “The Powerful Continuum Mechanics”, Brescia, Università Cattolica del Sacro Cuore, November 13-14, 2014.[7]

    Title of the talk: “Morphoelastic Rods”.

27. Speaker at the conference “INDAM Workshop Special Materials in Complex Systems” (SMACS). INdAM – Istituto Nazionale di Alta Matematica, Rome, May 18-22, 2015. [8]

    Title of the talk: A "non-smooth regularization" of a forward-backward parabolic equation.

28. Speaker at the Scientific Assembly of the National Group of Mathematical Physics, Montecatini, October 22-24, 2015.

    Title of the talk: “Accretion of an elastic body on a rigid support: the treadmilling regime”

29. Speaker at the meeting “Recent advances in the Mechanics of Materials”, Faculty of Architecture of the University of Sassari in Alghero, November 27-28, 2016.

    Title of the talk: “Accretion of an elastic layer on a spherical bead: the treadmilling regime”.

30. Speaker at the conference “ESMC10 – 10th European Solid Mechanics Conference”, Bologna, July 2-6, 2018.

    Title of the talk: "A nonlinear theory for fibre-reinforced magneto-elastic rods."

31. Invited speaker at the meeting "Giornate Signorini", Arezzo, January 25, 2019.[9]

    Title of the talk: "Macroscopic and microscopic behavior of thin elastic ribbons".

32. Speaker at the conference: “AIMETA 2019: XXIV Congress – Associazione Italiana di Meccanica Teorica e Applicata”, Rome, September 15-19, 2019.

    Title of the talk: "On the straight-helicoid to spiral-ribbon transition in thin elastic ribbons."

33. Speaker at the conference “EMMC18 - 18th European Mechanics of Materials Conference”, Oxford, April 4-6, 2022.

    Title of the talk: “Shape Programming of a Magnetic Elastica.”

34. Invited speaker at the conference “Giornate Signorini”, Perugia, November 4-5, 2022.[10]

    Title of the talk: “Surface accretion of a pre-stretched half-space: Biot’s problem revisited”.

35. Speaker at the conference "ICCM07 - 7th International Conference on Material Modelling" held in Cape Town from November 29 to December 1, 2022.

    Title of the talk "Surface accretion of a pre-stretched half-space: Biot’s problem revisited".

[6] Reference: https://web.archive.org/web/20240429153705/http://varmodmech.dimi.uniud.it/.
[7] Reference: https://web.archive.org/web/20240429153452/http://www.dmf.unicatt.it/musesti/adc/.
[8] Reference: https://web.archive.org/web/20150719210346/http://www.mat.unimi.it:80/users/rocca/SMACS.html
[9] First edition of the meeting dedicated to the commemoration of Antonio Signorini. Reference: https://web.archive.org/web/20240429154604/https://www.zerospreco.com/giornate-signorini.
[10] Edition with 22 speakers in the program, organized by the University of Perugia.

36. Speaker at the conference internazionale "IWSS2023 - 2nd Italian Workshop on Shells and Spatial Structures", Politecnico di Torino, June 26-28, 2023.[11]

    Title of the talk: "A coordinate-free approach to the mechanics of thin shells and its application to a fluid structure interaction problem of the vibration frequencies of the eye bulb".

37. Speaker at the Meeting dei Gruppi AIMeTA GIMC-GMA-GMBA, Reggio Calabria, July 12-14, 2023. Title of the talk: "A fluid structure interaction problem of the vibration frequencies of the eye bulb".

38. Speaker at the conference "Continuum mechanics dialogues", Udine, December 4-5, 2023.[12]

    Title of the talk: "A coordinate-free approach to the mechanics of thin shells and its application to the mechanics of the ocular bulb".

39. Speaker at the conference "SIAM Conference on Mathematical Aspects of Materials Science", Pittsburgh, PA, USA, May 19-23, 2024.

    Title of the talk: "Elastic-viscoplastic shells with growth: an Eulerian formulation".

40. Speaker at the conference "WCCM 24 / PANAMC 24 - World Congress on Computational Mechanics / Pan American Congress on Computational Mechanics", Vancouver, BC, Canada, July 21-26, 2024.

    Title of the talk: "Elastic-inelastic shells with growth: an Eulerian formulation".

41. Invited speaker at the workshop "New perspectives in Shape and Topology Optimization", ESI - Erwin Schrödinger International Institute for Mathematics and Physics, Vienna, December 11-15, 2024.[13]

    Title of the talk "Shape programming of a magnetic elastica".

42. Invited speaker at the workshop "STABILITY, MULTIAXIAL FATIGUE AND FATIGUE LIFE PREDICTION IN STATICS AND DYNAMICS OF INNOVATIVE STRUCTURAL AND MATERIAL COUPLED SYSTEMS", Udine, September 9-11, 2025.
    Title of the talk "Finite-dimensional approximation of the solutions of the Fokker-Planck equation: a case study".[14]

43. Invited speaker at the Thematic Programme "Free Boundary Problems", ESI - Erwin Schrödinger International Institute for Mathematics and Physics, Vienna, December 9, 2025.[15]

    Title of the talk "Using stochastic thermodynamics with internal variables to model spreading of cell orientation under cyclic stretch".

44. Invited speaker at the INDAM Meeting "Mathematical Models and Methods for Hierarchical Systems in Mechanics", Cortona, September 22-26, 2025.

    Title of the talk: "Capturing orientational spreading in cell populations undergoing cyclic stretch".

45. Invited speaker at the conference on the occasion of Davide Ambrosi's 60th birthday, Turin, March 15, 2026.

    Title of the talk: "A mechanical model of ocular bulb vibrations and implications for acoustic tonometry".

[11] Reference: https://web.archive.org/web/20240429155652/https://sites.google.com/view/iwss/iwss2023.
[12] Reference: https://web.archive.org/web/20240429155546/https://cmd23.uniud.it/
[13] Reference: https://web.archive.org/web/20240429170112/https://www.esi.ac.at/events/e504/
[14] Reference: https://web.archive.org/web/20250618183054/https://cism.it/en/activities/courses/J2503/
[15] Reference: https://web.archive.org/web/20251213221914/https://www.esi.ac.at/events/e555/

Seminar Activity

1. Seminar “Derivation of the Reissner-Mindlin plate theory by Gamma Convergence”, Nečas Center for Mathematical Modeling at the Faculty of Mathematics and Physics, Charles University, Prague, December 2006.

2. Seminar "On thermal effects in rigid ferromagnets", given in October 2007 at the CNA-Center for Nonlinear Analysis, Carnegie-Mellon University, Pittsburgh - PA, USA.

3. Seminar “Contact interactions in granular materials”, given on July 17, 2007 at the Department of Mathematics and Physics of the Università Cattolica del Sacro Cuore, Brescia.

4. Seminar “Coupling dynamic micromagnetics with the heat equation”, given on April 21, 2008 at the Nečas Center for Mathematical Modeling at the Faculty of Mathematics and Physics, Charles University, Prague.

5. Seminar “Theories of shearable beams and plates as gamma limit of three-dimensional micropolar elasticity”, given on March 9, 2009 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

6. Seminar “From finite elasticity to elasticity with residual stress through Gamma-convergence”, given on May 17, 2010 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

7. Seminar “Some analytical problems from strain-gradient plasticity”, given on November 22, 2010 at IMATI – Istituto di Matematica Applicata e Tecnologie Informatiche del CNR, Pavia.

8. Seminar “Energetic solution of the torsion problem in strain-gradient plasticity”, given on May 9, 2011 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

9. Seminar “Modeling hydrogen transport and phase transformation in metallic solids”, given on December 3, 2012 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

10. Seminar “Modeling hydrogen transport and phase transformation in metal-hydrides”, given on December 4, 2012 at the New Technologies Center West Bohemia, Plzen, Czech Republic.

11. Seminar “Growth of an actin layer on a spherical bead: the treadmilling regime”, given at: COPPE - Mechanical Engineering Department, Federal University of Rio de Janeiro.

12. Seminar “Eshelbian coupling in morphoelastic rods”, given in Ravello on September 26, 2015 during the 40th edition of the Summer School of Mathematical Physics of GNFM – Gruppo Nazionale di Fisica Matematica.

13. Seminar “Assessing energetic and dissipative effects in strain-gradient plasticity”, given on November 10, 2014 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

14. Seminar “Accretion of an actin layer on a spherical bead: the treadmilling regime”, given on December 21, 2015 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

15. Seminar “A nonsmooth variant of the nonlinear diffusion equation”, given on December 19, 2016 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

16. Seminar “Surface accretion of a pre-stretched half-plane: Biot's problem revisited”, given on March 2, 2022 at the University of Vienna, Faculty of Mathematics.

17. Seminar “Surface accretion of a pre-stretched half-space: Biot’s problem revisited”, given on February 8, 2023 at the Department of Mathematics of the Politecnico di Torino.

18. Seminar “Surface accretion of a pre-stretched half-space: Biot’s problem revisited”, given on May 19, 2023 at COPPE - Mechanical Engineering Department, Federal University of Rio de Janeiro.

19. Seminar “Surface accretion of a pre-stretched half-space: Biot’s problem revisited” given on May 31, 2023 at OIST-Okinawa Institute of Science and Technology.

20. Seminar “A mechanical model of ocular bulb vibrations and implications for acoustic tonometry”, given on March 18, 2024 at the Nečas Center for Mathematical Modeling, Faculty of Mathematics and Physics, Charles University, Prague.

21. Seminar “Modeling the Effect of Strain Amplitude on Orientation Spreading in Cell Ensembles Subjected to Cyclic Stretch”, given on May 15, 2025 at the Mechanical Engineering Department of the Massachusetts Institute of Technology.

22. Seminar “Modeling the Effect of Strain Amplitude on Orientation Spreading in Cell Ensembles Subjected to Cyclic Stretch”, given on June 5, 2025 at the Department of Basic and Applied Sciences for Engineering of Sapienza Università di Roma.

Organization, direction and coordination of national and international research projects and groups, or participation in the same

Coordination of PRIN projects funded by MUR

- Coordinator of the PRIN 2022 project: “Unveiling embodied intelligence in natural systems for bioinspired actuator design".

  Project duration: 24 months. Funding amount: 196,578 Euros. Project organized in 3 research units based at: Roma Tre University, Scuola Superiore Sant’Anna di Pisa and Scuola Internazionale Superiore di Studi Avanzati (SISSA, Trieste). The Project Coordinator coordinates the research unit of Roma Tre University, consisting of: 2 units of permanent university staff and 1 research fellow.

Coordinamento di progetti di ricerca di tipo “Progetto giovani ricercatori” finanziati dal Gruppo Nazionale di Fisica Matematica (GNFM) dell’Istituto Nazionale di Alta Matematica (INdAM)[16]

- Coordinator of the Young Researchers research project: “Multifield models for materials with microstructure: ferromagnets and liquid crystals”, funded by INDAM-GNFM in 2007.

  Project participants: 3 university researchers and 1 Attaché Temporaire d'Enseignement et de Recherche. Project duration: 12 months. Funding amount: 4000 Euros.

[16]La partecipazione ai bandi elencati era riservata agli aderenti al GNFM afferenti a una Unità di Ricerca dell’INdAM. Il progetto aveva la durata da un minimo di sei mesi al massimo di dodici e andava presentato da un Coordinatore, il quale doveva essere un Ricercatore in servizio presso Università o Istituzioni italiane.

- Coordinator of the Young Researchers research project: "Physico-mathematical modeling of smart materials and structures" funded by INDAM-GNFM in 2009.

  Project participants: 3 university researchers, 1 Attaché Temporaire d'Enseignement et de Recherche, 1 fellow, 2 PhD students. Project duration: 12 months. Funding amount: 4000 Euros.

- Coordinator of the Young Researchers Research Project: "Mathematical modeling of morphing phenomena", funded by INDAM-GNFM in 2013.

  Project participants: 2 university researchers and 3 PhD students. Project duration: 12 months. Funding amount: 2500 Euros.

- Coordinator of the Young Researchers research project: "Optimal design of active soft materials", funded by INDAM-GNFM in 2015.

  Project participants: 3 university researchers and 1 graduate technician. Project duration: 12 months. Funding amount: 3000 Euros.

Supervision of research fellows

- Supervision of the research activity carried out by Filippo Recrosi during the tenure of an annual research fellowship from June 3, 2019 to May 31, 2020.

- Supervision of the research activity carried out by Davide Renzi during the tenure of an annual research fellowship from April 1, 2022 to March 31, 2023.

- Supervision of the research activity of Mohsen Damen during the tenure of an annual research fellowship starting from March 1, 2024 until today.

Participation in PRIN projects funded by MUR and COFIN projects funded by MURST

- Participation in COFIN projects 1998, 2000 and 2002, "Mathematical methods for materials science". Member of the research unit of Rome "Tor Vergata". National coordinator of the project: Paolo Podio-Guidugli. Number of research units in the projects: 10 in COFIN project 1998; 6 in COFIN project 2000; 8 in COFIN project 2002.

- Participation in PRIN project 2005 "Mathematical Models for Materials Science".

  Member of the Research Unit of Rome "Tor Vergata". National coordinator of the project: Antonio Di Carlo. Total funding: 357,900 Euros. Project duration: 36 months. Number of research units: 6.

- Participation in PRIN project 2017, "Mathematics of active materials: from mechanobiology to smart devices".

  Member of the Research Unit of Roma Tre. National coordinator of the project: Luigi Preziosi. Total funding: 910,520 Euros. Project duration: 36 months. Number of research units: 5.

Participation in research projects of the "Young Researchers Project" type funded by the National Group of Mathematical Physics

- Participation in the Young Researchers research project: "Material Reorganization and Microstructures in Polymeric and Ferromagnetic Materials", funded by INDAM-GNFM in 2006.

Project leader: Luciano Teresi. Funding: 2,000 Euro. Project duration: 12 months. Number of project participants: 8.

- Participation in the Young Researchers research project: "Physical-Mathematical Modeling of Electroactive Continua", funded by INDAM-GNFM in 2008.

  Project leader: Luciano Teresi. Funding: 5,000 Euro. Project duration: 12 months. Number of project participants: 9.

- Participation in the Young Researchers research project: "Material Reorganization Phenomena in Soft Condensed Matter", funded by INDAM-GNFM in 2011.

  Project leader: Luciano Teresi. Funding: 3,000 Euro. Project duration: 12 months. Number of project participants: 6.

- Participation in the Young Researchers research project: "Mathematics of Shape Control in Soft Materials", funded by INDAM-GNFM in 2014.

  Project leader: Luciano Teresi. Funding: 2,400 Euro. Project duration: 12 months. Number of project participants: 3.

- Participation in the Young Researchers research project: "Mathematical modelling of bio-hybrid and bio-inspired soft robots", funded by INDAM-GNFM in 2016.

  Project leader: Luciano Teresi. Funding: 4,000 Euro. Project duration: 12 months. Number of project participants: 5.

Participation in other funded projects

- Participation in the "Departments of Excellence 2017-22" project of the Department of Engineering, Roma Tre University.

  As part of the project, supervision of the annual research fellowship of Filippo Recrosi, from June 3, 2019 to May 31, 2020, and the annual research fellowship of Davide Renzi, from April 1, 2022 to March 31, 2023, in the research group which worked on surface growth and 3D printing issues, in collaboration with Prof. Sonia Marfia (Roma Tre) and Giuseppe Zurlo (University of Galway).

- Participation in the "Departments of Excellence 2022-27" project of the Department of Industrial, Electronic and Mechanical Engineering, Roma Tre University.

- Carrying out activities within the Innovation Ecosystem "Rome Technopole" as part of Mission 4 of the PNRR – Education and Research – Investment Component 1.5, funded by the Next GenerationEU program of the European Union.

  Activity period: from March 2023 to June 2025. Activities are to be carried out at the Department of Industrial, Electronic and Mechanical Engineering of Roma Tre University in: Spoke 1: Applied research, technology development and innovation – 0.4 person-months/year; Spoke 2: Technology transfer, new enterprises, business incubation and acceleration – 0.4 person-months/year; Spoke 3: University education, industrial doctorates, internationalization – 0.3 person-months/year.

- Participation in the project "Magnetorheological Materials", funded by Leonardo spa, Electronics Division.

  Project leader: Jacopo Ciambella (Sapienza University of Rome). Project duration: 12 months. Funding: 50,000 Euro. Project participants: 2 associate professors from Sapienza, 1 associate professor from Roma Tre, and contract staff.

Contribution to the activities of international research groups

1. Collaboration with the Faculty of Mathematics of Charles University of Prague, the Institute of Thermomechanics of the Czech Academy of Sciences, and the Institute of Physics of the Czech Academy of Sciences.

   Research activity in collaboration with Tomas Roubicek and Petr Sittner. As part of this collaboration, activities no. 2, 3, 4, 5, and 10 described in Section IV.2 were carried out, partially funded by international research projects. This collaboration produced the articles [A11], [A14], [A16], [A18], [A19], [A24], [A26], [A27], [A38], [A45], [A50].

2. Collaboration with the Mechanical Engineering Department of the Massachusetts Institute of Technology and the Polytechnic Department of Engineering and Architecture of the University of Udine.

   This collaboration consisted of research activities on the topic of growth and remodeling in soft matter in a group formed by Rohan Abeyaratne, Tal Cohen (MIT), and Eric Puntel (Udine). Within this collaboration, a contribution was made to the research project "Growth Matters", funded from January 1, 2018 to August 31, 2019 as part of the MISTI Global Seed Funds program between the Massachusetts Institute of Technology and the University of Udine. This collaboration produced the articles [A32], [A44], [A57], [A58], and [A59].

3. Collaboration with the Mechanical Engineering Department of the Federal University of Rio de Janeiro.

   Research activities on phase transition problems in collaboration with Fernando Pereira Duda. As part of this collaboration, activities no. 6, 8, and 13 described in Section IV.2 were carried out. This collaboration produced the articles [A28] and [A31].

4. Collaboration with the Mathematics Department of the National University of Galway and the Department of Civil, Computer, and Aeronautical Engineering of Roma Tre University.

   Research activities on growth problems in collaboration with Giuseppe Zurlo (Galway) and Sonia Marfia (Roma Tre). As part of this collaboration, activity no. 9 described in Section IV.2 was carried out. This collaboration produced the article [A61].

5. Collaboration with UTIA – Institute of Information Theory and Automation of the Czech Academy of Sciences and the DISG – Department of Structural and Geotechnical Engineering of Sapienza University of Rome.

   Research activity on magnetoelastic thin structures in collaboration with Martin Kruzik (UTIA) and Jacopo Ciambella (Sapienza University of Rome), co-funded by the projects GACR-FWF 19-29646L (Czech Republic and Austria) and RM11916B7ECCFCBF (Sapienza). As part of this collaboration, activity no. 12 described in Section IV.2 was funded. This collaboration produced the article [A54].

6. Collaboration with the Faculty of Mathematics - University of Vienna and the Institute for Analysis and Scientific Computing - Vienna University of Technology.

   Research on the mathematical modeling of surface growth and shape change phenomena conducted in collaboration with a group led by Ulisse Stefanelli (University of Vienna) and Elisa Davoli (Vienna University of Technology). As part of this collaboration, activity no. 11 described in Section IV.2 was carried out. This collaboration produced the article [D1].

Coordination and participation in educational and scientific initiatives at national and international level

Direction or participation in editorial boards of journals, editorial series, encyclopedias and treatises of recognized prestige

- Guest Editor (with Giuseppe Saccomandi and Anja Schlömerkemper) of the Special Issue "Mathematics & Mechanics: Natural Philosophy in the 21st Century" published in International Journal of Non-Linear Mechanics, March 2020.

Organization of conferences and minisymposia of scientific character in Italy or abroad

- Organizer together with Lorenzo Giacomelli (Sapienza University of Rome) of the minisymposium: "*Partial differential equations in materials science*" *7th European Conference on Elliptic and Parabolic Problems,* Gaeta, May 21 – 25, 2012.[17]
- Member of the organizing committee of the conference: "Physics and Mathematics of Materials: Current Insights". GSSI (Gran Sasso Science Institute) in L'Aquila, January 20-22, 2016.[18]
- Member of the organizing committee of the conference: "Mathematics and Mechanics: Natural Philosophy in the 21st Century", Oxford, June 24 – 27, 2018.[19]

Participation in governing bodies of scientific societies or national or international academic associations

- Participation in the Executive Committee, as Secretary and Treasurer, of the international scientific society: International Society for the Interaction of Mechanics and Mathematics (ISIMM) for the four-year period 2017-20.
- Participation in the Executive Board of the Italian Society of the Science of Constructions, elected for the three-year period 2021-23.
- Participation in the Executive Board of the Italian Society of the Science of Constructions, elected for the three-year period 2024-26.

Participation in national and international scientific associations or academic-type associations

- Member of ISIMM - International Society for the Interaction of Mechanics and Mathematics, since 2017.
- Member of AIMeTA - Italian Association of Theoretical and Applied Mechanics, since 2021.
- Member of SNP - Society for Natural Philosophy, since 2022.
- Member of SIAM - Society for Industrial and Applied Mathematics, since 2024.

[17] Reference: https://web.archive.org/web/20240429204402/https://www.math.uzh.ch/en/konferenzdetails0?key1=247

[18] Reference: https://web.archive.org/web/20240429210049/https://gssi.it/seminars/seminars-and-events-2016/item/769-mm16-pg75-physics-and-mathematics-of-materials-current-insights

[19] Reference: https://web.archive.org/web/20240429204016/https://erc-instabilities.unitn.it/material/FINAL_conference_poster.pdf

Participation in commissions for the awarding of scientific prizes

- Member of the Committee for the evaluation of the best doctoral dissertation in Mechanics of Materials defended in 2020 for the award of the AIMeTA Junior Prize for 2021.

Research scholarships

- Ph.D. scholarship in Structural Engineering – XIV cycle at the University of Rome "Tor Vergata".

  Ph.D. program established by Ministerial Decree 8/7/1998 published in the Official Journal n. 55 bis – IV^ special series of 17/7/1998. Course duration: 3 years.

- Awarded an Erasmus Mundus scholarship "BE MUNDUS" from October 25 to November 28, 2015, to carry out research activities at: Federal University of Rio de Janeiro.

  Activities carried out in collaboration with Prof. Fernando Pereira Duda (Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering, Mechanical Engineering Department "Department of Mechanical Engineering at COPPE").

Reviewing activity

1. Reviewing activity for various international journals.

   List of journals: Annals of Solid and Structural Mechanics; Archive for Applied Mechanics; Applications in Engineering Science; ASME Journal of Pressure Vessel Technology; Asymptotic Analysis; Communications in Partial Differential Equations; Communications on Pure and Applied Analysis; Continuum Mechanics and Thermodynamics; Discrete and Continuous Dynamics Systems; Discrete and Continuous Dynamics Systems-S; European Journal of Mechanics A/Solids; International Journal of Solids and Structures; Journal of Elasticity; Journal of Mechanics of Materials and Structures; Journal of Nonlinear Science; Journal of Sound and Vibration; Journal of the Mechanics and Physics of Solids; Mathematics and Computers in Simulation; Mathematical Problems in Engineering; Mathematical Models and Methods in Applied Sciences; Mathematical Methods in Applied Sciences; Mathematics and Mechanics of Solids; Meccanica; Mechanics of Materials; Mechanics Research Communications; Proceedings of the Royal Society A; Quarterly Journal of Mechanics and Applied Mathematics; SIAM Journal of Mathematical Analysis; Smart Materials and Structures; Wave Motion; ZAMP - Zeitschrift für angewandte Mathematik und Physik.

2. Reviewing activity for AMS Mathematical Reviews.

3. Reviewer of the Doctoral Thesis "Transient morphing and optimal shape design of synthetic and natural active structures" presented by Dario Andrini at SISSA-Scuola Internazionale Superiore di Studi Avanzati in the academic year 2021-22.

4. Member of the doctoral examination committee of Francisco Forte Neto, thesis defense scheduled for December 5, 2025. Thesis title: "Mechanochemical coupling in bulk-surface systems: continuum formulation, analysis, and simulation", at COPPE, Federal University of Rio de Janeiro. Supervisors: Prof. Fernando Pereira Duda and Prof. Eliot Fried.

5. 2 reviews, on behalf of Roma Tre University, of funding proposals in the Vinci Call promoted under the Galileo Program of the Italian-French University.

6. Reviewer for the VQR (Evaluation of Research Quality) for ANVUR (National Agency for the Evaluation of Universities and Research) for the period 2015-2019.

Teaching activity at university level

Undergraduate courses

1. 1 time lecturer of the 5 CFU (50 hours) course “Structural Mechanics 1”, SSD ICAR/08, for the Bachelor’s Degrees in Building Engineering, Environmental and Land Engineering, and Energy Engineering, at the University of Rome “Tor Vergata”, academic year 2002-03.
2. 1 time lecturer of the 5 CFU (50 hours) course “Solid Mechanics 1”, SSD ICAR/08, for the Bachelor’s Degrees in Building Engineering, Environmental and Land Engineering, and Energy Engineering, at the University of Rome “Tor Vergata”, academic year 2003-04.
3. 1 time lecturer of the 5 CFU (50 hours) course “Structural Mechanics I/1”, SSD ICAR/08, for the Bachelor’s Degrees in Building Engineering, Environmental and Land Engineering, Energy Engineering, and Building-Architecture Engineering, at the University of Rome “Tor Vergata”, academic year 2004-05.
4. 1 time lecturer of the 5 CFU (50 hours) course “Continuum Mechanics”, SSD ICAR/08, for the Bachelor’s Degree in Engineering of Models and Systems, at the University of Rome “Tor Vergata”, academic year 2005-06.
5. 1 time lecturer of the 5 CFU (50 hours) course “Structural Mechanics 1”, SSD ICAR/08, for the Bachelor’s Degree in Building Engineering, at the University of Rome “Tor Vergata”, academic year 2006-07.
6. 3 times lecturer of the 9 CFU (90 hours) course “Structural Mechanics”, SSD ICAR/08, for the Bachelor’s Degree in Building Engineering, at the University of Rome “Tor Vergata”, academic years 2011-12, 2012-13, 2013-14.
7. 6 times lecturer of the 9 CFU (90 hours) course “Mechanics of Materials and Structures” (in English), SSD ICAR/08, for the Bachelor’s Degree in Engineering Sciences, at the University of Rome “Tor Vergata”, academic years 2011-12, 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17.
8. 8 times lecturer of the 9 CFU (72 hours) course “Structural Mechanics”, SSD ICAR/08, for the Bachelor’s Degree in Mechanical Engineering, at Roma Tre University, academic years 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25, 2025-26.
9. 1 time lecturer, for 6 CFU (54 hours), within the 12 CFU course “Structural Mechanics”, SSD ICAR/08, for the Bachelor’s Degree in Civil Engineering, at Roma Tre University, academic year 2021-22.
10. 1 time lecturer of the 9 CFU (72 hours) course “Structural Mechanics”, SSD ICAR/08, for the Bachelor’s Degree in Mechanical Engineering – Curriculum Technologies for the Sea, at Roma Tre University, academic years 2023-24, 2024-25, 2025-26.

Master’s Degree Courses

1. 1 time lecturer for the 5 CFU (50 hours) course “Structural Mechanics II/1”, SSD ICAR/08, Master’s Degree in Civil Engineering, at the University of Rome "Tor Vergata", academic year 2003-04.
2. 2 times lecturer for the 5 CFU (50 hours) course “Structural Mechanics II/2”, SSD ICAR/08, Master’s Degree in Civil Engineering, at the University of Rome "Tor Vergata", academic years 2004-05, 2006-07.

3. 3 times lecturer for the 10 CFU (100 hours) course “Structural Mechanics II”, SSD ICAR-08, Master’s Degree in Civil Engineering, at the University of Rome "Tor Vergata", academic years 2007-08, 2008-09, 2009-10.

4. 1 time lecturer for the 9 CFU (90 hours) course “Advanced Topics in Structural Mechanics”, SSD ICAR-08, Master’s Degree in Civil Engineering, at the University of Rome "Tor Vergata", academic year 2010-11.

5. 7 times lecturer for the 6 CFU (54 hours) course “Structural Dynamics”, SSD ICAR/08, Master’s Degree in Civil Engineering for the Protection from Natural Hazards, at Roma Tre University, academic years 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23.

Supervision of Bachelor’s Theses

1. Supervisor of the thesis by Manuel Angelini: "Instability of Piezoelectric Plates", Bachelor’s Degree in Civil Engineering, University of Rome "Tor Vergata", 2011.

2. Supervisor of the thesis by Francesco De Santis: "Mathematical Model for the Description of Plant Biomechanics", Bachelor’s Degree in Building Engineering, University of Rome "Tor Vergata", 2013.

3. Supervisor of the thesis by Giordano Martufi: "Morphoelastic Beams", Bachelor’s Degree in Building Engineering, University of Rome "Tor Vergata", 2013.

4. Supervisor of the thesis by Daniele Perugia: "The finite-element method", Bachelor’s Degree in Engineering Sciences, University of Rome "Tor Vergata", 2013.

5. Supervisor of the thesis by Luca Marinangeli: "Multiphysics Simulation by the Finite-Element Method", Bachelor’s Degree in Engineering Sciences, University of Rome "Tor Vergata", 2014.

6. Supervisor of the thesis by Saad Moussa: "Continuum Modeling in Biomechanics", Bachelor’s Degree in Engineering Sciences, University of Rome "Tor Vergata", 2015.

7. Supervisor of the thesis by Mara Carbone: "The Strength Criteria in Structural Mechanics: Historical Developments", Bachelor’s Degree Thesis in Building Engineering, University of Rome "Tor Vergata", 2016.

8. Supervisor of the thesis by Christian Milano: "The Chain Fountain", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2017.

9. Supervisor of the thesis by Chiara Lignola: "Euler’s Elastica", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2017.

10. Supervisor of the thesis by Luigi Fagiolo: "Funicularity of Shell Structures", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2017.

11. Supervisor of the thesis by Davide Viscione: "Anisotropic Shells", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2017.

12. Supervisor of the thesis by Edoardo Braccini: "Euler’s Elastica", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2018.

13. Supervisor of the thesis by Francesca Mura: "Realization and Experimentation of Magnetoelastic Beams", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2018.

14. Supervisor of the thesis by Damiano Broccoletti: "Mechanical Properties of Magnetorheological Elastomers", Bachelor’s Degree in Mechanical Engineering, Roma Tre University, 2018.

15. Supervisor of the thesis by Davide Renzi: "Introduction to the Mechanics of Structures for High School Classes", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2018.

16. Supervisor of the thesis by Michele Falsi: "The Kapitza Pendulum: Experimental Aspects", Bachelor's Thesis in Mechanical Engineering, Roma Tre University, 2018.

17. Supervisor of the thesis by Filippo Russi: "The Kapitza Pendulum: Theoretical Aspects", Bachelor's Thesis in Mechanical Engineering, Roma Tre University, 2018.

18. Supervisor of the thesis by Alessio Mariti: "Mechanical Analysis of Lattice Structures Using the Large Structure Set from PASCO", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2019.

19. Supervisor of the thesis by Chiara Lanciano: "Eulerian Instability: Theoretical and Application Aspects", Bachelor's Thesis in Mechanical Engineering, Roma Tre University, 2019.

20. Supervisor of the thesis by Roberto Maiozzi: "Stress Analysis of a Saint-Venant Beam Using the Finite-Element Method", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2019.

21. Supervisor of the thesis by Alberto Saliola: "The Problem of Torsion in Multicellular Sections", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2020.

22. Supervisor of the thesis by Daniele Martino: "Euler's Elastica", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2020.

23. Supervisor of the thesis by Alessandro Muccichini: "Torsion of a Multicellular Section with the Finite-Element Method", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2021.

24. Supervisor of the thesis by Edoardo Brienza: "Auxetic Metamaterials", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2021.

25. Supervisor of the thesis by Angelica Brajon: "Mechanical Instability in the Elastic Field", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2021.

26. Supervisor of the thesis by Leonardo Donatelli: "Design and Creation of Educational Demonstration Devices for Structural Mechanics", Bachelor's Degree in Mechanical Engineering, Roma Tre University, 2021.

Supervision of Master's Theses

1. Supervisor of the thesis by Paolo Locatelli: "Adhesion of Thin Structures on Rigid Supports", Master's Degree in Civil Engineering, University of Rome "Tor Vergata", 2007.

2. Supervisor of the thesis by Alex Musarra: "Mechanical Phase Diagram of Shrinking Cylindrical Gels", Master's Degree in Mathematical Engineering, University of Rome "Tor Vergata", 2015.

3. Supervisor of the thesis by Pierluigi Morra: "A Reduced Order Model for a Hydrogel Material", Master's Degree Thesis in Mechanical Engineering, University of Rome "Tor Vergata", 2016.

4. Supervisor of the thesis by Edoardo Oddo Casano: "Study of the Behavior of a Reinforced Concrete Equipment Storage, Designed According to NTC2018 for Seismic Loading, Subjected to an Explosive Action within a Petrochemical Plant", Master's Degree in Civil Engineering for the Protection from Natural Hazards, Roma Tre University, 2020.

5. Supervisor of the thesis by Davide Renzi: "Numerical Analysis of Stresses and Deformations in Surface Growth", Master's Degree in Mechanical Engineering, Roma Tre University, 2022.

6. Co-supervisor of the thesis by Nicola Pede: "Statics and Dynamics of Peeling Processes", Bachelor's Degree in Modeling and Systems Engineering, University of Rome "Tor Vergata", 2005.

7. Co-supervisor of the thesis by Ivan Benemerito: “Modeling of Orbital Reconstruction Implants”, Master’s Degree in Mathematical Engineering, University of Rome "Tor Vergata", 2014.

Supervision of PhD Theses

- Supervisor (together with Rodolfo Repetto and Nicoletta Tambroni, University of Genoa) of the PhD thesis by Silvia Lombardi: “Fluid structure interaction problem in the human eye”, XXXIII Cycle, Gran Sasso Science Institute.

  Date of the thesis defense: January 29, 2024.

- Supervisor (together with Jacopo Ciambella, Sapienza University of Rome) of the PhD thesis by Matteo Ruggieri: “Magnetorheological Elastomers for Tunable Vibration Absorbers: Modelling, Fabrication and Experimental Characterization”, XXXVII Cycle, Department of Civil Engineering, Computer Science and Aeronautical Technologies, Roma Tre University.

  Date of the thesis defense: November 20, 2025.

Participation in the PhD Board within PhD programs accredited by the Ministry

- 5 participations in the PhD Board for "CIVIL ENGINEERING", University of Rome "Tor Vergata".

  Participation from Cycle XXVIII to Cycle XXXII. Course duration: 3 years.

- 6 participations in the PhD Board for "CIVIL ENGINEERING", Roma Tre University.

  Participation from Cycle XXXIII to Cycle XXXVIII. Course duration: 3 years.

- 1 participation in the PhD Board for "MECHANICAL AND INDUSTRIAL ENGINEERING", Roma Tre University.

  Participation in Cycle XXXIX. Course duration: 3 years.

Participation in examination committees for the award of the PhD title

- Member of the Examination Board for the award of the title of Philosophiae Doctor (PhD) in Mathematical Analysis, Models and Applications of two candidates, held at SISSA - International School for Advanced Studies, Trieste, on October 29, 2022.

Teaching activity in PhD courses

- Responsible for the “Tutorial” sessions (6 hours) in the PhD course: “Hierarchical Multiscale Methods using the Andersen–Parrinello–Rahman Formulation of Molecular Dynamics” held from April 3 to 8, 2017 at the Okinawa Institute of Science and Technology Graduate University.

- Cycle of lectures (6 hours) entitled: “F.E. formulation for Shell Structures” as part of the international PhD course "Understanding nonlinear problems in civil and industrial engineering", organized within the XP-resilience Project. (Project Reference: 721816, Call: H2020-MSCA- ITN-2016, Period: 09/2016 - 08/2020) held at the Department of Engineering of Roma Tre University on May 7 and 8, 2019.

- PhD course (4 hours) entitled: “A coordinate-free treatment of thin shells”, held on May 8 and 10, 2023 at the Department of Mechanical Engineering – COPPE of the Federal University of Rio de Janeiro, Brazil.

Services rendered to universities and research institutions

Participation in selection committees for comparative evaluations in the Scientific Disciplinary Sector ICAR/08

- Member of the Judging Committee for the Comparative Evaluation Procedure for the assignment of 1 university researcher position in the scientific-disciplinary sector ICAR/08 Structural Engineering at the Faculty of Engineering of the University of Udine, announced by D.R. n. 127 of 22/02/2008, published in the G.U. n. 19 IV Special Series of 07/03/2008.
- Member of the Judging Committee for the selection procedure for the recruitment of 1 fixed-term researcher type A for the competition sector 08/B2 - scientific-disciplinary sector ICAR/08 - at the Department of Structural and Geotechnical Engineering of the University of Rome "La Sapienza", announced by D.D. Rep. 225/2019 (Prot. n. 2581) on 2/12/2019.
- Member of the Judging Committee for the public selection procedure for the recruitment of 1 fixed-term researcher type A – pursuant to art.24 – paragraph 3 – lett. a) L.240/2010 – duration 3 years – Competition sector 08-B2 - S.S.D. ICAR/08 – Structural Engineering, at the Department of Engineering, Roma Tre University, announced by DD Rep., 1507/2021 Prot- 74413 of 5/10/2021.
- Member of the Judging Committee for the selection procedure for the recruitment of 1 fixed-term researcher pursuant to art.24, paragraph 3, lett. b) of Law 240/2010 at the Department of Civil and Industrial Engineering of the University of Pisa, Competition sector 08/B2 Structural Engineering, SSD ICAR/08 Structural Engineering. Selection code RIC2023b1.

Participation in selection committees for admission to PhD programs

- Member of the three-person Committee for admission to the PhD in Civil Engineering for admission to Cycle XXXIV at the Department of Engineering, Roma Tre University
- Member of the three-person Committee for admission to the PhD in Civil Engineering for admission to Cycle XXXVIII at the Department of Engineering, Roma Tre University

Services rendered at the Department of Engineering, Roma Tre University.

1. Member of the Research Quality Committee of the Department of Engineering.
2. Departmental representative for orientation activities.
3. Member of the Committee for the management of resources related to the Department of Excellence Project at the Civil Engineering Section of the Department of Engineering.
4. Member of the Review Group for the Master's Degree in Civil Engineering for Protection from Natural Risks, with duties supporting the Coordinator of the Program regarding: drafting of the Review Report; completion of SUA forms; drafting of the course regulations.
5. Responsible for the "School-Work Alternation" Project entitled "Statics of lattice structures", aimed at high school students, held from December 17 to 21, 2018, for a total of 15 hours.
6. Contact person for checking the coherence between educational objectives of the courses and educational objectives of the degree courses in Civil Engineering.
7. Member of the three-person committee for the evaluation of the CVs of applicants to the Call Rep. 102/2018 prot. 3198 of September 17, 2018, for the assignment of supplementary teaching/support positions for the 2018/2019 academic year of interest to the Department of Engineering.

Services rendered at the Department of Industrial, Electronic and Mechanical Engineering, Roma Tre University

- Member of the working group established at the Department of Industrial, Electronic and Mechanical Engineering for the coordination of orientation activities.

Services rendered at the Faculty of Engineering and the Department of Civil Engineering and Computer Engineering, University of Rome "Tor Vergata":

- Support activities for the degree course in System Models Engineering and Mathematical Engineering relating to: student orientation in choosing their educational path; support in the drafting of study plans; pre-evaluation and approval of study plans; support to the Program Coordinators in drafting the academic regulations and the Annual Report; expert member of the commission for state exams.

Public Engagement and Outreach

- Member, as a university professor, of the committee (appointed by departmental decree n. 1213 of 1/12/2023) for the public competition, by exam, for 88 positions as deputy director in the Directorate role of the National Fire Brigade, established by Decree of the Department of Firefighters, Public Rescue and Civil Defense, N. 722 of 22/09/2023.

- Representative of the Department of Engineering during the 8th edition (March 27, 2019) and of the Department of Industrial, Electronic and Mechanical Engineering during the 12th edition (April 3, 2023) of the Open Day - Orientation Day at Liceo Scientifico Leonardo da Vinci in Sora.

  The orientation activity is held annually to provide students an opportunity to interact directly with higher education institutions and universities. Numerous universities from the north, center and south of Italy took part in the 8th edition.

- Participation in the Next Generation Orientation project as part of the PNRR (M4.C1-24).

- Presentation activities in high school classes of the educational offerings of the Degree Course in Civil Engineering and the Degree Course in Mechanical Engineering of Roma Tre University.

Participation in advanced courses and workshops

1. Participation in the XXIV Summer School of Mathematical Physics organized by the National Institute of Higher Mathematics - National Group of Mathematical Physics, Ravello, September 20 – October 2, 1999.

2. Participation in the XXXX School of Mathematical Physics organized by the National Institute of Higher Mathematics - National Group of Mathematical Physics, Ravello, September 18-26, 2015.

3. Participation in the Workshop: "Marrying continuum and molecular physics: the Andersen-Parrinello-Rahman method revised into a scale bridging device", May 23, 2016. CECAM-HQ-EPFL, Lausanne.

4. Participation in the Workshop "Recent Advances in Mechanics and Mathematics of Materials-RAM3", Rome, November 18-20, 2019.

5. Participation in the CISM-UniUD Joint Advanced Webinar "Optimization of Shape and Material Properties: Advanced Mathematical Methods and 3D Printing", Udine, April 12-16, 2021.

6. Participation in the workshop as chairman: continuum mechanics dialogues, Rome, Sapienza University, January 20-21, 2025.

Scientific production

Articles in international journals

1. Podio-Guidugli, P., & Tomassetti, G. (2001). Thickness waves in electroelastic plates. Wave Motion, 34(2), 175–191. https://doi.org/10.1016/S0165-2125(00)00080-9

2. Lancioni, G., & Tomassetti, G. (2002). Flexure waves in electroelastic plates. Wave Motion, 35(3), 257–269. https://doi.org/10.1016/S0165-2125(01)00108-1

3. Podio-Guidugli, P., & Tomassetti, G. (2002). On the steady motions of a flat domain wall in a ferromagnet. European Physical Journal B, 26(2), 191–198. https://doi.org/10.1007/s10051-002-8958-4

4. Podio-Guidugli, P., & Tomassetti, G. (2004). On the evolution of domain walls in hard ferromagnets. SIAM Journal on Applied Mathematics, 64(6), 1887–1906. https://doi.org/10.1137/S003613990343402X

5. Paroni, R., Podio-Guidugli, P., & Tomassetti, G. (2006). The Reissner-Mindlin plate theory via Γ-convergence. Comptes Rendus Mathematique, 343(6), 437–440. https://doi.org/10.1016/j.crma.2006.08.006

6. Podio-Guidugli, P., & Tomassetti, G. (2006). Magnetization switching with nonstandard dissipation. IEEE Transactions on Magnetics, 42(11), 3652–3656. https://doi.org/10.1109/TMAG.2006.881907

7. Froiio, F., Tomassetti, G., & Vardoulakis, I. (2006). Mechanics of granular materials: The discrete and the continuum descriptions juxtaposed. International Journal of Solids and Structures, 43(25–26), 7684–7720. https://doi.org/10.1016/j.ijsolstr.2006.03.023

8. Pede, N., Podio-Guidugli, P., & Tomassetti, G. (2006). Balancing the force that drives the peeling of an adhesive tape. Nuovo Cimento Della Societa Italiana Di Fisica B, 121(5), 531–543. https://doi.org/10.1393/ncb/i2006-10067-0

9. Paroni, R., Podio-Guidugli, P., & Tomassetti, G. (2007). a Justification of the Reissner–Mindlin Plate Theory Through Variational Convergence. Analysis and Applications, 05(02), 165–182. https://doi.org/10.1142/s0219530507000936

10. Riey, G., & Tomassetti, G. (2008). A variational model for linearly elastic micropolar plate-like bodies. Journal of Convex Analysis, 15(4), 677-691. http://www.heldermann.de/JCA/JCA15/JCA154/jca15046.htm

11. Roubíček, T., Tomassetti, G., & Zanini, C. (2009). The Gilbert equation with dry-friction-type damping. Journal of Mathematical Analysis and Applications, 355(2), 453–468. https://doi.org/10.1016/j.jmaa.2009.01.060

12. Paroni, R., & Tomassetti, G. (2009). A Variational Justification of Linear Elasticity with Residual Stress. Journal of Elasticity, 97(2), 189–206. https://doi.org/10.1007/s10659-009-9217-1

13. Riey G. & Tomassetti G. (2009). Micropolar linearly elastic rods. Communications in Applied Analysis, 13(4), 647–658. http://www.acadsol.eu/en/articles/13/4/14.pdf

14. Roubíček, T., & Tomassetti, G. (2010). Thermodynamics of shape-memory alloys under electric current. Zeitschrift Für Angewandte Mathematik Und Physik, 61(1), 1–20. https://doi.org/10.1007/s00033-009-0007-1

15. Favata, A., Podio-Guidugli, P., & Tomassetti, G. (2010). Energy splitting theorems for materials with memory. Journal of Elasticity, 101(1), 59–67. https://doi.org/10.1007/s10659-010-9244-y

16. Podio-Guidugli, P., Roubíček, T., & Tomassetti, G. (2010). A Thermodynamically Consistent Theory of the Ferro/Paramagnetic Transition. Archive for Rational Mechanics and Analysis, 198(3), 1057–1094. https://doi.org/10.1007/s00205-010-0349-z

17. Tomassetti, G. (2011). On configurational balance in slender bodies. Archive of Applied Mechanics, 81(8), 1041–1050. https://doi.org/10.1007/s00419-010-0470-3

18. Roubíček, T., & Tomassetti, G. (2011). Ferromagnets with eddy currents and pinning effects: Their thermodynamics and analysis. Mathematical Models and Methods in Applied Sciences, 21(1), 29–55. https://doi.org/10.1142/S0218202511004976

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Rome, December 22, 2025
Giuseppe Tomassetti