

**Prof. Dr. Ing. Marco Paggi**  
**Full Professor of Structural Mechanics**  
**IMT School for Advanced Studies Lucca**  
**Piazza San Francesco, 19**  
**55100 Lucca, Italy**

**Biographical sketch and career**

- 17/12/2001: Master's degree in Civil Engineering at Politecnico di Torino, 110/110 cum laude.
- 06/05/2005: PhD in Structural Engineering (XVII Cycle) at Politecnico di Torino, recipient of a scholarship from the Italian Ministry of Education, University and Research.
- From 01/01/2005 to 31/7/2007: Post-doctoral research fellow in Structural Mechanics in the Department of Structural and Geotechnical Engineering, Politecnico di Torino.
- From 01/08/2007 to 30/10/2013: Assistant Professor in Structural Mechanics in the Department of Structural and Geotechnical Engineering, Politecnico di Torino, with tenure from 01/08/2010. Aggregate Professor of Structural Mechanics from 2011 to 2013.
- From 01/11/2013 to 27/12/2018: Associate Professor of Structural Mechanics at the IMT School for Advanced Studies Lucca, appointed by a direct call for the recruitment of principal investigators of ERC Starting Grants (Italian Law 04/11/2005, n. 230, art. 1, comma 9, modified by the Italian Law 30/12/2010, n. 240, art. 29, comma 7).
- 13/01/2014: Italian Scientific Habilitation for the position of Associate Professor in Structural Mechanics.
- 28/03/2017: Italian Scientific Habilitation for the position of Full Professor in Structural Mechanics.
- From 28/12/2017: Full Professor in Structural Mechanics at the IMT School for Advanced Studies Lucca.
- From April 2019: co-founder of the academic spin-off and innovative start-up TREE-TOWER S.R.L. (<http://www.tree-tower.eu/>) together with Dr. Francesco Biancalani (CEO; former PhD scholar of IMT in Management Science).

**Appointments by other institutions**

- From 01/02/2010 to 31/01/2011: Alexander von Humboldt Research Fellow at the Gottfried Wilhelm Leibniz Universität di Hannover, Germany, Institute of Continuum Mechanics.
- From 10/09/2013 to 09/10/2013: Visiting Professor in Structural Mechanics in the research unit DYSCO (Dynamical Systems, Control and Optimization) of the IMT School for Advanced Studies Lucca, Italy.
- From 28/04/2014 to 31/05/2014: Visiting Full Professor at the Université Paris-EST, Laboratoire de Modélisation et Simulation Multi Echelle, Marne-La-Vallée, France.
- From 29/10/2014 to 31/12/2017: Member of the Technical Committee of the Task 13 "Performance and Reliability of Photovoltaic Systems" of the Photovoltaic Power Systems Programme of the International Energy Agency.
- From 14/09/2015 to 17/06/2016: Adjunct Professor for the course "Mechanics of Masonry Structures and Fracture Mechanics", 25 hours, 2nd year of the Master in Civil Engineering, Università degli Studi di Trento, Italy.

- From 01/10/2015 to 31/10/2015: Visiting Professor for “coupled mechanical problems involving fracture and instabilities in elastic and inelastic solids and structures”, conferred by Università degli Studi di Trento, Dipartimento di Ingegneria Civile, Ambientale e Meccanica, Trento, Italy.
- From 01/04/2016 to 30/04/2016: Visiting Professor for “numerical methods for nonlinear fracture mechanics”, conferred by Università degli Studi di Trento, Dipartimento di Ingegneria Civile, Ambientale e Meccanica, Trento, Italy.
- From 28/09/2016 to 24/09/2017: Adjunct Professor for the course "Structural mechanics and structural design", 60 hours, 3rd year of the Bachelor degree in Chemical Engineering, Università di Pisa.
- From 01/06/2017 to 30/06/2017: Visiting Professor for numerical techniques for mechanics of materials, conferred by Università degli Studi di Trento, Dipartimento di Ingegneria Civile, Ambientale e Meccanica, Trento, Italy.
- From 25/09/2017 to 21/09/2018: Adjunct Professor for the course "Structural mechanics and structural design", 60 hours, 3rd year of the Bachelor degree in Chemical Engineering, Università di Pisa.
- From 18/06/2018 to 17/07/2018: Visiting Professor in the Department of Structural, Geotechnical and Building Engineering, Politecnico di Torino.
- From 01/09/2018: Member of the International Advisory Board of the Excellence Laboratory MANUTECH-SISE (Lyon-St Etienne, France) on Science and Engineering of Surfaces and Interfaces.
- From 11/05/2019 to 22/05/2019: GIAN (Global Initiative of Academic Network) Professor for the course "Computational Fracture Mechanics for Photovoltaic Reliability", 32 hours, Indian Institute of Technology Delhi, India.

### **Coordination and institutional activities**

- From 26/06/2009 to 03/07/2013: elected member of the Executive Board of the Italian Group of Fracture (2 consecutive appointments).
- From 01/11/2013: Director of the research unit "MUSAM - Multi-scale Analysis of Materials", IMT School for Advanced Studies Lucca (<http://musam.imtlucca.it/>) and Director of the experimental laboratory MUSAM-Lab (<https://www.imtlucca.it/it/ricerca/laboratori/musam-lab>)
- From 13/12/2013 to 31/12/2015 and from 01/02/2017 to date: elected member of the Academic Council, IMT School for Advanced Studies Lucca.
- From 22/12/2015: Director’s Delegate for Research, IMT School for Advanced Studies Lucca.
- From 15/02/2016: member of the executive board of the joint Office for Technology Transfer of Scuola Superiore Sant’Anna, Scuola Normale Superiore, Scuola IMT Alti Studi Lucca and Scuola Universitaria Superiore Pavia (JoTTO, Joint Technology Transfer Office, <http://www.jointto.it>)
- From 15/03/2013 to 14/03/2016: Member of the board of professors for the PhD in "Structural Engineering", Politecnico di Torino, A.Y.: 2013/2014 - Cycle: 29.
- From 01/11/2014 to 31/10/2017: Member of the board of professors for PhD in "Institutions, Markets and Technologies", Scuola IMT - Istituzioni, Mercati, Tecnologie - Alti Studi – LUCCA - Cycle: 30.

- From 01/11/2014 to 31/10/2017: Director of the PhD curriculum in "Computational Mechanics" within the PhD "Institutions, Markets and Technologies", Scuola IMT Istituzioni, Mercati, Tecnologie - Alti Studi - LUCCA, Cycle: 30.
- From 01/11/2015 to 31/10/2018: Member of the board of professors for the PhD in "Institutions, Markets and Technologies", Scuola IMT - Istituzioni, Mercati, Tecnologie - Alti Studi - LUCCA - Cycle: 31.
- From 22/01/2016: Member of the Executive Committee of the Mechanics of Materials Group of the Italian Association of Theoretical and Applied Mechanics (AIMETA)
- From 20/12/2018: Member of the Scientific and Technical Committee of the Digital Innovation Hub Toscana.
- From 27/02/2019: Member of the Scientific and Technical Committee of the Association ARTES4.0, for the management of the national competence center ARTES4.0 on Industry 4.0, supported by the Italian Ministry of Economic Development.
- 2019: Appointed Member of the Technical Committee of the National Research Plan (MIUR) for the Area 12 - Green Technologies.
- From 01/11/2016 to 31/10/2019: Member of the board of professors for the PhD in "Institutions, Markets and Technologies", Scuola IMT - Istituzioni, Mercati, Tecnologie - Alti Studi - LUCCA - Cycle: 32.
- From 01/11/2017 to 31/10/2020: Member of the board of professors for the PhDs in "Cognitive and Cultural Systems" and "Systems Science", Scuola IMT - Istituzioni, Mercati, Tecnologie - Alti Studi - LUCCA - Cycle: 33.
- From 01/11/2018 to 31/10/2021: Member of the board of professors for the PhDs in "Cognitive and Cultural Systems" and "Systems Science", Scuola IMT - Istituzioni, Mercati, Tecnologie - Alti Studi - LUCCA - Cycle: 34.

### **Editorial appointments**

- **Member** of the **Editorial Board** of the journal **Heliyon** (Elsevier), August 2018-July 2019.
- **Member** of the **Editorial Board** of the journal **Computers, Materials & Continua** (Tech Science Press), since March 2018.
- **Founding Associate Editor** of **Frontiers in Mechanical Engineering**, Section Tribology, since March 2018.
- **Contributing Editor** of the journal **Mechanics of Advanced Materials and Structures** (Taylor & Francis), since 2017.
- **Member** of the **Editorial Board** of the **International Journal of Solids and Structures** (Elsevier), since February 2016.
- **Member** of the **Editorial Board of Scientific Reports** (Nature Publishing Group), Chemical Physics section, since May 2015.
- **Associate Editor** of the **Journal of Mechanical Engineering Science** (Proceedings of the Institution of Mechanical Engineers, Part C, SAGE), Materials, Stress Analysis & Structures section, since November 2014.
- **Member** of the **Editorial Board of the American Journal of Engineering and Applied Sciences**, January 2015-March 2019.

- **Review Editor of the Journal Frontiers of Mechanics of Materials**, since 2014. <http://community.frontiersin.org/people/MarcoPaggi/153547>
- **Member of the Editorial Board of The Journal of Strain Analysis for Engineering Design** (SAGE), since November 7, 2011.
- **Member of the Review Board of the Journal Fracture and Structural Integrity**, since August 2009.
- **Guest editor** of the special issue of the journal *Meccanica* (Springer) Vol. 53 (3), February 2018, entitled: Recent Advances on the Mechanics of Materials. Co-guest editors: L. Bardella (Università di Brescia) and P. Vena (Politecnico di Milano), doi: 10.1007/s11012-017-0803-1
- **Guest editor** of the special issue of the Journal of Strain Analysis for Engineering Design (SAGE) Vol. 51 (4), May 2016, entitled: Special Issue on the EUROMECH Colloquium 575. Co-guest editor: D.A. Hills (Università di Oxford), doi: 10.1177/0309324716642941.
- **Guest editor** of the special issue of the journal Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science (SAGE) Vol. 230 (9), May 2016, entitled: Special Issue on EUROMECH 575. Co-guest editor: D.A. Hills (Università di Oxford), doi: 10.1177/0954406216635330.
- **Managing Guest-Editor** of the special issue "Fracture and Contact Mechanics for Interface Problems" [Engineering Fracture Mechanics, Vol. 80, 1-2, 2012, doi: 10.1016/j.engfracmech.2012.01.002]. Co-guest editors: A. Carpinteri (Politecnico di Torino, Italy) and P. Wriggers (University of Hannover, Germany).
- **Managing Guest-Editor** of the special issue "Computational Methods for Interface Mechanical Problems" [Computational Mechanics, Vol. 50, 3, 2012, doi: 10.1007/s00466-012-0771-1]. Co-guest editors: A. Carpinteri (Politecnico di Torino, Italy) and P. Wriggers (University of Hannover, Germany).

## Honours and awards

- Biography included in *Cartaditalia* n. 3 "New frontiers of scientific research in Italy" published by Istituto Italiano di Cultura, Bruxelles, in Italian, French, English and Dutch, [http://iicbruxelles.esteri.it/iic\\_bruelles/resource/doc/2017/11/cartaditalia\\_n3-rid.pdf](http://iicbruxelles.esteri.it/iic_bruelles/resource/doc/2017/11/cartaditalia_n3-rid.pdf).
- March 2013 - Nominated member of the **Young Academy of Europe**.
- March 2012 - **Scholarship from ABMEC** (Brazilian Association for Computational Methods in Engineering) for the participation in the 10th World Congress of Computational Mechanics, July 8-13, 2012, San Paolo, Brasil.
- 2008, 2009, 2010 & 2011 - **Award for Outstanding Scientific Activity of a Young Researcher**, conferred by Politecnico di Torino (2008: 5th position among all faculty members younger than 40; 2009: 2nd position; 2010: 1st position; 2011: 1st position).
- **Prize for Outstanding Collaboration of a Visiting Researcher** (Auszeichnung für hervorragende Zusammenarbeit als Gastwissenschaftler), conferred by the Freundeskreis der Leibniz Universität Hannover, Sektion Mechanik, January 2011.
- January 2010 - Recipient of the **Fellowship of the Alexander von Humboldt Foundation**. The AvH sponsorship is limited to those individuals who have demonstrated outstanding achievements in research and who contribute significantly to international cooperation and understanding.

- **ESIS Young Scientist Award 2010**, conferred by the European Structural Integrity Society. The purpose of the Young Scientist Award is to recognize individuals younger than 40 who have made distinguished, innovative work in fracture mechanics in their early career. The award was given to Dr. Paggi: "For outstanding contributions to fracture mechanics, and particularly in fatigue scaling, friction effects and nonlinear crack modelling".
- **Prize for Young Authors IGF 2009** conferred by the Italian Group of Fracture (IGF) for the paper entitled "Fatigue of quasi-brittle materials: a unified interpretation of microstructural size, crack size and size-scale effects".
- Selected by a joint ESF-ALLEA review panel as one of the 21 attendees to the ESF-ALLEA Forum "**Humanities Spring 2009 I**" that led to the statute of the Young Academy of Europe (Vienna, 8-10 June, 2009).
- Prize "**Premio Optime**" for the best young graduates of the year, conferred by the Industrial Union of Turin, in collaboration with the Turin University and Politecnico di Torino (2002).

### Coordination and management of research projects

- From 2020 to 2022: Coordinator of the research unit at IMT for the **Project of Relevant National Interest 2017** (PRIN) "XFAST-SIMS: Extra fast and accurate simulation of complex structural systems", together with University of Pavia, Politecnico di Torino, Politecnico di Milano, Politecnico di Bari, Università degli Studi Roma La Sapienza, 1,199,955 Euro, 36 months.
- From 01/03/2018 to 28/02/2020: Coordinator of a research unit for the **POR FESR 2014/2020** – action 1.1.5 sub-action a1 - Call 1, Strategic Projects of Research and Development "GlycoG-Lab 4.0", 2,500,575 Euro, 24 months.
- From 01/06/2018 to 31/12/2019: Coordinator of a research unit (Scuola IMT Alti Studi Lucca) for the project "Brilliant Researchers Impact on Growth Health and Trust in research" (grant agreement 818515), Research Executive Agency (Brussels), **H2020 call Marie Skłodowska-Curie COFUND**, Researchers' Night and Individual Fellowships Global, 200,000 Euro (12,500 Euro for Scuola IMT Alti Studi Lucca), 20 months.
- From 15/03/2018 to 14/03/2020: Principal investigator of the **MIUR-DAAD Joint Mobility Program 2017** "Multi-scale modeling of friction for large scale engineering problems". The project, in collaboration with Prof. Dr.-Ing. A. Popp (Bundeswehr Universität Munich) is granted by the Italian Ministry of Education, University and Research (MIUR), and the Deutscher Akademischer Austausch Dienst (DAAD), 40,000 Euro, 24 months.
- From 01/03/2018 to 28/02/2020: Principal investigator of a project **POR FSE 2014-2020**: financial support for 1 two-years post-doctoral research fellowship, co-funded by Tuscany Region and by the company CROMOLOGY ITALIA spa (Porcari, Lucca, Italia), 54,000 Euro, 24 months.
- From 01/06/2016 to 31/12/2017: Coordinator of a research unit (Scuola IMT Alti Studi Lucca) for the project "Brilliant Researchers Impact on Growth Health and Trust in research" (grant agreement 722944), Research Executive Agency (Brussels), **H2020 call Marie Skłodowska-Curie COFUND**, Researchers' Night and Individual Fellowships Global, 180,000 Euro (10,000 Euro for Scuola IMT Alti Studi Lucca), 20 months.
- From 01/01/2017 to 30/06/2018: Principal investigator of the **ERC Proof of Concept 2016** PHYSIC "Photovoltaics with superior crack resistance", granted by the European Research Council, 149.500 Euro, 18 months.

- From 01/12/2012 to 30/11/2017: Principal investigator of the **ERC Starting Grant 2012** "Multi-field and multi-scale Computational Approach to design and durability of PhotoVoltaic Modules" (grant agreement 306622), European Research Council (Brussels), FP7 call ERC-2012-StG\_20111012, 1,483,980 Euro, 60 months.
- From 07/03/2012 to 06/03/2016: Principal investigator of the project **FIRB Future in Research 2010** "Structural mechanics models for renewable energy applications" (RBFR107AKG), MIUR (Roma), 954,800 Euro, 48 months.
- From 01/01/2011 to 31/12/2012: Principal investigator of the **Italy-Germany Vigoni project 2010** "3D modelling of crack propagation in polycrystalline materials", Ateneo Italo Tedesco (Trento), 5.000 Euro, 24 months. German partner: Prof. Peter Wriggers, Leibniz University Hannover (10,000 Euro from DAAD).

## **Publications**

Prof. Paggi is co-author of 130 peer-reviewed articles indexed in SCOPUS, 6 research book chapters, 1 edited research book [Paggi M, Hills D (Eds.) (2020) Modeling and Simulation of Tribological Problems in Technology, CISM "International Centre for Mechanical Sciences" series, Springer, <https://www.springer.com/gp/book/9783030203764>], 4 didactic textbooks, and 2 technical reports of the International Energy Agency.

For bibliographic data, see:

SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=35148174600>

ORCID: <http://orcid.org/0000-0001-9409-9782>