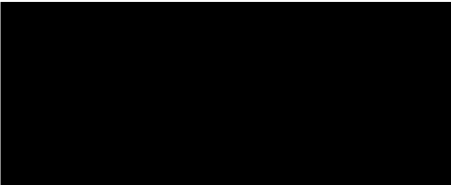
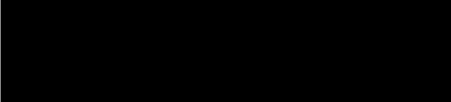
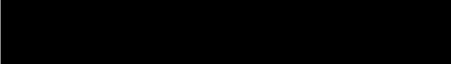




Massimo Vassalli

Curriculum Vitae

Personal Data

Full name Massimo - Vassalli
Date and place of birth 
Nationality 
Civil status 

Executive Summary

My general research interest is in understanding the mechanisms by which physical forces are transduced into biologically relevant signals (**mechanotransduction**), and their role in the homoeostasis of key physiological processes whose alteration eventually leads to pathology or degeneration, such as in cancer or ageing (**mechanobiology**). Moreover, exploiting my technical background in physics and engineering, I'm also committed in developing enabling microscopy and spectroscopy tools to measure mechanical properties, image and manipulate biological objects at the level of cells and molecules (**nanoengineering**).

Education

- 2001-2004 **PhD in Non-linear dynamics and complex systems**, *The University of Florence, Engineering faculty*, Florence, Italy
Interdisciplinary PhD program organized by the engineering faculty in collaboration with life sciences faculty (Physics and Biology). Title of the thesis: Optimization of an AFM system for the measurement of physical properties in biological microsystems. Mentors: Prof. Roberto Livi (Department of Physics) and Dr Franco Quercioli (National Institute of Applied Optics, Florence, Italy).
- 1997-1999 **Master degree in Physics**, *The University of Florence*, Florence, Italy, *Completed with full note 110/110*
Title of the thesis: Heat conduction in chains of non-linear oscillators. Mentor: Dr. Antonio Politi; Co-Mentor: Prof. Roberto Livi.

- 1996-1997 **Erasmus student**, *The J.Gutenberg University, Mainz, Germany*
Attendance of and examination in two monographic courses spanning the full semester (atomic physics, experimental physics)
- 1992-1996 **Bachelor in Physics**, *The University of Florence, Florence, Italy*

Experience

Just after my MSc degree in physics I moved to the industry, working in the area of informatics and co-founding an innovative startup in the field of internet programming. In parallel, I continued my career development by enrolling in a strongly interdisciplinary PhD program in Biophysics at the University of Florence. At the end of it, I started my scientific career as research fellow and in 2009 I took on a senior researcher position at the Institute of Biophysics in Genova (Italy). There, I opened the NanoBioScience lab, with a technical focus on the development of tools and models for the nanomechanical characterisation of cells and molecules. During 2016 I was granted an Endeavor fellowship by the Australian government and I moved to Sydney, to expand my mechanobiology knowledge working with Prof Boris Martinac at the Victor Chang Cardiac Research Institute. At the end of 2019 I was appointed Reader within the James Watt School of Engineering of the University of Glasgow where I joined the Center for the Cellular Microenvironment as head of the Cellular Mechanobiology Lab, later becoming professor of Bioengineering (August 2022).

Industry

- 2015-2021 **FABCrea s.r.l.**, *Genova, Italy*, Innovative startup in the field of precision motion control and instrumentation for optical inspection and measurement, Role: Co-founder and president of the advisory board
- 2005-2009 **ITTI s.a.s.**, *Pistoia, Italy*, Web company specialized in server side dynamic applications., Role: Co-founder and CTO, programmer

Academia

- 2022– **Professor of Bioengineering (Full professor)**, *James Watt School of Engineering of the University of Glasgow, Glasgow, UK*, Role: PI at the Centre for the Cellular Microenvironment, focused on understanding the interactions between materials, proteins and cells to gain fundamental insight into engineering cell behaviour and translating technologies to provide better healthcare.
Applications: mechanobiology, mechanosensing and nanomechanics.
- 2019–2022 **Reader (Associate professor)**, *School of Engineering of the University of Glasgow, Glasgow, UK*, Role: PI at the Centre for the Cellular Microenvironment, focused on understanding the interactions between materials, proteins and cells to gain fundamental insight into engineering cell behaviour and translating technologies to provide better healthcare.
Applications: mechanobiology, mechanosensing and nanomechanics.
- 2009–2019 **Researcher (Lecturer / Assistant professor)**, *Institute of Biophysics of the National Research Council, Genova, Italy*, Role: PI of the NanoBioScience group devoted to the application of advanced nanoengineering tools to the study of single molecules and single cells
Applications: mechanobiology, biosensing, imaging, nanomechanics.



- 2016 **Australia Endeavour fellow**, *Victor Chang Cardiac Research Institute*, Sydney (Australia), Fellow of the Australian government under the Endeavour scheme (4 months) spent at the Mechanobiology lab (Prof Boris Martinac)
Duration: 4 months
- 2005-2009 **Researcher**, *Institute of Complex Systems of the National Research Council*, Florence, Italy, Role: member of the scanning probe microscopy group (Leader: Dr Bruno Tiribilli)
Special focus on device design and implementation for single molecule force spectroscopy.
- 2004-2005 **Researcher**, *National Institute of Applied Optics*, Florence, Italy, Role: member of the Biophotonics laboratory staff (Leader: Dr Franco Quercioli), equipped with advanced optical and scanning probe microscopy systems
- 2004 **Technologist**, *National Institute of Applied Optics*, Florence, Italy, Role: IT staff for the support of research duties (programming of laboratory equipment)
- 2002-2004 **Post doc**, *National Institute of Applied Optics*, Florence, Italy, Project title: Optimization of a scanning probe microscope for the study of the dynamics of biological systems
- 2001-2002 **Scholarship holder**, *National Institute of Applied Optics*, Florence, Italy, Project title: Implementation of an AFM-SNOM microscope for biomedical applications

Awards and appointments

- 2023 **Visiting professor**, *Univ. Florence*, Florence (Italy), Visiting position to perform joint research activity with Prof. Giovanni Romano and deliver postgraduate teaching
- 2022- Director of Impact for the James Watt School of Engineering of the University of Glasgow. Member of the School Management Board, in charge of designing and delivering the innovation strategy of the School.
- 2022- Member of the board of the International Society for MechanoBiology; representative for the Europe region.
- 2021- Member of the committee of the "Biological Physics" special interest group of the Institute of Physics.
- 2021-2022 Appointed as Industrial Liaison Head at the School of Engineering of the University of Glasgow. The ILH Chairs the biomedical engineering subgroup of the Industrial Advisory Board
- 2021 **Visiting professor**, *Univ. Florence*, Florence (Italy), Visiting position to perform joint research activity with Prof. Marco Capitanio and deliver postgraduate teaching
- 2021-2024 Appointed as Deputy Theme Lead of the Technology Touching Life theme of the Advanced Research Centre of the University of Glasgow, to support the Theme Lead and contribute to promotion of a collaborative culture to realise transformational research

- 2018 **Visiting scientist**, *ETH*, Zürich (Switzerland), Fellowship for a long term stay funded by CNR to perform joint research activity with Dr Tomaso Zambelli, co-PI of the Laboratory for Biosensors and Bioelectronics
- 2018-Present Delegate of the director of the Institute of Biophysics of the CNR to represent the institute at the Regional level
- 2017-Present Member of the Scientific Committee of the Liguria Regional District for Life Science (PLSV, Genova, Italy) representing a consortium of small and medium enterprises inside the District
- 2016 **Visiting scientist**, *Univ. Southampton*, Southampton (UK), Fellowship for a long term stay funded by CNR to perform joint research activity with Prof. Glynne-Jones and Prof Hill
- 2016-2017 Member of the scientific board of the consortium TICASS (Genova, Italy, www.ticass.it), representing the National Research Council as an expert in the field of Bioeconomy
- 2014-2016 Secretary of the Italian Society for Pure and Applied Biophysics (SIBPA) and member of the management committee
- 2015 **CNRS fellow**, *Univ. Sophia-Antipolis*, Nice (France), Fellowship at the I.N.L.N. (Prof Gian Luca Lippi), funded by the CNRS to perform joint research activity
- 2014 **SNSF fellow**, *ETH*, Zürich, Fellowship at the Laboratory of Biosensors and Bioelectronics (Prof Janos Vörös, Dr Tomaso Zambelli), funded by the Swiss National Science Foundation to perform joint research activity on Fluid-FM
- 2012-2016 Member of the scientific board of the Regional Biotechnology Pole Tecnobionet (Genova, Italy), representing the National Research Council in the scientific board ; since 2014 head of the fund raising activity of the district.

Teaching activity

University teaching

- 2023 Design of the new course *Advanced Artificial Intelligence and Deep Learning Techniques for Engineering* for fourth year students enrolled in the BEng/MEng programs of the School of Engineering, University of Glasgow, UK.
- 2023– Convener for the *Introduction to Artificial Intelligence* course [ENG4200], University of Glasgow, UK.
- 2022 Design of the new course *Introduction to Artificial Intelligence* for fourth year students enrolled in the BEng/MEng programs of the School of Engineering, University of Glasgow, UK.
- 2022– Convener for the *Biomed Engineering Skills 2* course [ENG2012] and lecturer for the "Python" module, University of Glasgow, UK.
- 2020-2022 Lecturer for the "Python" module of the course *Biomed Engineering Skills 2* [ENG2012] at the University of Glasgow, UK.
- 2020-2022 Lecturer for the "DNA Technology" module of the aligned courses *Intro to Biomed Engineering and Biophysics of Cells and Sys* [ENG1031, ENG4181, ENG5308] at the University of Glasgow, UK.



- 2021– Convener for the *Biomed Engineering Skills 3* course [ENG3090] and lecturer for the "Image Processing in Python" module, University of Glasgow, UK.
- 2021 Design of the new course *Biomedical Engineering Skills 3* for third year students enrolled in the BEng/MEng Biomedical Engineering curriculum, University of Glasgow, UK.
- 2019– Lecturer for the "Biomechanics" module of the course *Engineering in Biology* [ENG2087] at the University of Glasgow, UK.
- 2018 Invited lecturer on "Cell mechanics and mechanobiology" at the University of Côte d'Azur, Nice, France.
- 2018 Invited teacher at the Summer School on Mechanobiology of the European Biophysical Society, organized in Kotor, Montenegro.
- 2018 Teacher at the Winter School on Biotechnology, PhD school organized by the University of Perugia, Italy; monographic module on Mechanosensitive ion channels
- 2017 Technical lecturer at the first International School on Computational Microscopy, PhD school organized by CNR-ISASI and University of Naples, Amalfi Italy; topic: "Exploiting label-free biomarkers for single cell phenotyping"
- 2017-Present **Member of the teaching board of the PhD Course**, *University of Genova*, Genova, Italy, PhD course in biotechnology for translational medicine
- 2017,2018 Teacher at the advanced school of the University of Genova, ISSUGE; monographic module on Scanning Probe Microscopy
- 2016 Qualification as Associate Professor for the Italian University Ministry
- 2015-2017 Member of the evaluation committee of the PhD in Nanophysics of the University of Genova, held at the Italian Institute of Technology
- 2007-2008 **Aggregate professor**, *University of Florence*, Florence, Italy, Professor of Physics for electric and management engineering classes
- 2002-2003 Teacher at the the post graduate course on *Innovative Microscopy for Biotechnology* of the University of Florence, Florence, Italy

University supervision

- Active PhD 6 first supervisor, 8 as second supervisor
- 2019- Supervision of MSc students in engineering (5-8/year since 2020), MEng students (1/year since 2019), MSc students stem cell engineering (1-2/year since 2020), BEng students (2-3/year since 2021)
- PhD -2019 Co-supervision of 7 PhD student at external universities: 1 University of Genova, Italy (Neuroscience); 1 joint student University of Genova, Italy (biotechnology for translational medicine) and University of Cote d'Azur, Nice, France (Physics); 2 ETH Zürich, Switzerland (bioengineering); 3 University of Florence, Italy (interdisciplinary course in Non-linear dynamics and complex systems)
- 2002-2020 Co-Supervisor of 23 Master Degree Thesis in Biotechnology, Physics, Engineering (Electronics, Mechanics, Automation, Informatics) at the University of Florence

Other



- 2023 External reviewer for PhD thesis defence/Viva at University of Southampton (UK), University of Trieste (Italy), Northumbria University (UK)
- 2022 External reviewer for PhD thesis defence/Viva at University of Newcastle (UK), University of Florence (Italy), 2x University of Genova (Italy)
- 2021 External reviewer for PhD thesis defence/Viva at VU University (Amsterdam, The Netherlands), University of Basilicata (Potenza, Italy), University Milano Bicocca (Milano, Italy), University of Perugia (Italy), ETH Zürich (Switzerland)
- 2020 External reviewer for PhD thesis defence/Viva at University of Côte d'Azur (Nice, France)
- 2018 Tutoring of 3 higher school students for a professional stage at the Institute
- 2017 Tutoring of 6 higher school students for a professional stage at the Institute
- 2016 Design of labs for higher school in collaboration with the Majorana-Giorgi high school in Genova
- 2013-2016 Laboratories for primary school (concept of measurement, temperature and energy)
- 2003-2006 Informatics teacher for continuing education courses of the Liguria region
- 2002-2005 Professor of Physics and Mathematics for the company AlphaTest, providing courses for secondary students preparing the admission exam for medicine and dentistry faculty. Intensive course of 4 weeks, 3h/day, 2 classes of about 30 students each.

International projects

- 2022-2027 EIC Pathfinder PRISM-LT, responding to the challenge on living materials; funded by the EU and the UK guarantee fund. Role: Coordinator of the submission, moved to partner due to pending EU-UK agreement.
- 2022-2023 International exchange project "Alliance for Mechanobiology" funded by the University of Glasgow and the University of Sydney. Role: Applicant, together with Dr. Lining Ju (University of Sydney, Australia).
- 2020-2022 International exchange project "Novel tools for mechanobiology: from Atomic Force Microscopy to Brillouin spectroscopy" funded by the Royal Society. Role: Applicant, together with Prof. Fioretto (University of Perugia, Italy).
- 2019-2024 H2020 Project "Developing and Implementing Sustainability-Based Solutions for Bio-Based Plastic Production and Use to Preserve Land and Sea Environmental Quality in Europe" (BIO-PLASTICS EUROPE) funded by the European Commission, call H2020-BG-2018-2020. Role: member of the CNR team, Task leader
- 2018-2020 International exchange project "Diagnostics for the future: Combining optical tomography with microfluidic systems for high throughput 3D imaging of single cells" funded by the Royal Society. Role: co-applicant, together with Prof. Peter Glynne-Jones (University of Southampton).
- 2017-2019 Scientific support to the University of Genova for the experimental activity at the Camogli laboratory in the context of the Life+ project "Re-establishment of the Ribbed Limpet (*Patella ferruginea*) in Ligurian MPAs by Restocking and Controlled Reproduction". Role: grant holder and manager of the lab.



2014-2016 PI of the CNR unit in the M3-HABs project Funded by European Union through the ENPI program. Project aimed at creating a pan-Mediterranean forecasting tool for toxic algae of the species *Ostreopsis Ovata* based on the technology developed by the CNR unit with the collaboration of several local companies. The project network is composed by 2 SMEs and 7 research centres. Role in the project: work package (WP4) leader.

National and Regional projects

- 2023-2028 Co-I of the program grant *Engineering the bone marrow niche to control stem cell regulation, metastatic evolution and cancer dormancy*.
- 2023-2028 Co-I of the Future Healthcare Technology grant *Mechanobiology-based medicine [Mechanomed]*.
- 2020-2024 PI of the project *Remote mechanical stimulation of stem cells for osteochondral regenerative therapy [ReMechStem]* to support a PhD scholarship, funded by the Medical Research Scotland.
- 2018-2020 Member of the project *Sensor* funded by the Toscana region to realize a fluorescence sensor for environmental applications. Project in partnership with other 10 partners from public and private sectors. Role in the project: Task leader.
- 2014-2016 Scientific coordinator of the project *OVmeter (Ostreopsis oVata meter)* Funded by the Liguria region to realize an optical system for the automated counting (segmentation and identification) of toxic algae in sea water to provide forecast tools. Project in partnership with the University of Genova 2 small enterprises and 1 large enterprise. Role in the project: scientific coordination of the whole project.
- 2014-2017 Flagship project "N-CHEM" aimed at implementing and testing new sensors for Alzheimer's disease. Role: active member; since 2015 coordinator of the unit of the Institute of Biophysics.
- 2013-2015 Project *Algameter* funded by the Liguria Region in the context of the Industry-Academia post-doc program. Topic: optical metrology for single cell identification and counting. Role: coordination of the activity. Project in collaboration with the company On Air s.r.l. and the Ligurian Marine Technology District (DLTM).
- 2013-2015 Project *Open Realtime for SCADA* funded by the Liguria Region in the context of the Industry-Academia post-doc program. Topic: advanced instrumentation control. Role: coordination of the activity. Project in collaboration with the company SITEM s.r.l..
- 2012-2014 Coordinator of the participation of the Institute of Biophysics to the flagship project RitMare funded by Italian Ministry of Research. Aim of the project: high resolution characterization of antifouling paintings stability and effectiveness.
- 2012-2014 Coordinator of the project *BioJerker* funded by Sicily region to realize a prototype of a new measuring system based on single cell force spectroscopy. Project in partnership with the Italian SME, Daimar s.r.l..

2009-2011 PI of the CNR unit in the PRIN2008 project Funded by the Italian Ministry of Research. Title: Protein inspired innovative biopolymers for tissue regeneration. Project in collaboration with University of Catania (coordinator), University of Basilicata (Potenza) and Rizzoli Hospital (Bologna).

Grant income from medical/bank foundations

- 2022-2024 Research grant on "Multicomponent Gel Noodles for New Textiles and Fabrics" funded by Leverhulme Trust.
- 2021-2022 Pump priming project on the design and development of vegetable-based scaffolds funded by Animal Free Research UK.
- 2015-2017 PI of the CNR unit in Genova of the project "Molecular and Cellular Bases of Serpin Conformational Diseases" Funded by Cariplo Foundation. Aim: Study of the molecular and cellular mechanisms associated to serpinopathies. Members of the consortium: University of Milano (coordinator), University of Brescia (partner).
- 2014-2016 PI of the CNR unit in the project "Molecular details of prion conformations" Funded by S.Paolo Foundation. Aim: Study of the molecular details of the conversion of the prion protein to the neurotoxic form, to identify new pharmacological targets. Members of the consortium: University of Genova (coordinator), Italian Institute of Technology (partner).
- 2011-2012 Coordinator of the project "Effect of electro-magnetic fields on mesenchymal stem cells: an innovative approach for the osteo-integration of titanium implants" funded by the S.Paolo Foundation. Project in collaboration with the University of Pavia.
- 2009-2010 PI of the project FFC #6/2009 funded by the Italian Foundation for Cystic Fibrosis. Title: Direct visualization of CFTR conformation by atomic force microscopy imaging.
- 2009 PI of the project "Study of the molecular basis of serpinopathies by means of force spectroscopy" funded by the Cassa di Risparmio di Genova Foundation.

Grant income from companies

- 2018-2019 Scientific support to the execution of in-field liquid flow measurements. Role: Coordinator. Funded by the company Biotec srl
- 2017-2018 Scientific support to the design and development of a Calcium imaging set-up. Role: grant holder. Funded by the company FABCrea srl
- 2016-2017 Industrial activity for the development of a custom microscope driver based on the open source micromanager platform. Role: grant holder. Funded by the company VacuumFAB srl
- 2016 Industrial activity for the development of controller for single molecule force spectroscopy based on a dsPIC architecture. Role: grant holder. Funded by the company FABCrea srl

Networking and affiliations

- 2022-present Member of the International Society for MechanoBiology
- 2020-present Member of the British Biophysical Society



- 2019-present Member of the Institute of Physics
- 2018-present Member of the ARBRE-MOBIEU COST Action CA15126
 - 2017-2016 Member of the European Network on Bioadhesion Expertise (ENBA) European COST Action
 - 2016-2017 Member of the Optical Society of America (OSA)
 - 2015-2016 Affiliated to the Neuroscience and Brain Technologies Department of the Italian Institute of Technology
 - 2011-2014 Affiliated to the Nanophysics Department of the Italian Institute of Technology
- 2013-Present Member of the Italian Society for Pure and Applied Biophysics
 - 2010-2014 Active member of Materials, Physics and Nanosciences (MPNS) European network on Biological adhesives: from biology to biomimetics, COST Action TD0906
 - 2010-2014 Active member of the Biomedicine and Molecular Biosciences (BMBS) European network on applications of Atomic Force Microscopy to NanoMedicine and Life Sciences (AFM4NanoMed& Bio) COST Action TD1002
- 2009-2011 Member of the Italian Physical Society
- 2005-2007 Affiliated to the Italian National Institute for Nuclear Physics (INFN), initiative TO61 on biological physics

Events organization

- 2024 Co-organizer of the sixth International Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with ETH Basel (Prof Daniel Müller) - in progress
- 2023 Co-organizer of the FEBS advanced course "Mechanics in Biology: from molecules to cells and tissues", organized in collaboration with University of Sydney (Prof Arnold Lining Ju) - <https://mechanicsinbiology2023.febsevents.org/>
- 2022 Co-organizer of the sixth International Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with the University of Aachen, Germany (Dr Jacopo Di Russo, Prof Rudolf Leube) - Camogli (Italy) - <https://n4m.mechanobiology.eu/2022.html>
- 2020 Co-organizer of the fifth International Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with EMPA Dübendorf (Dr Aldo Ferrari) and IOM-CNR Perugia (Dr S. Caponi) - online - <https://n4m.mechanobiology.eu/2020.html>
- 2019 Co-organizer of the "Cote d'Azur International Workshop on Cell Mechanics: Advanced Tools and Applications to Biomedical Problems", organized in collaboration with Prof. Gian Luca Lippi (University of Côte d'Azur, France) - Nice (France). <http://univ-cotedazur.fr/events/international-workshop-cell-mechanics>
- 2019 Co-organizer of the fourth International Camogli Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with EMPA Zürich (Dr Aldo Ferrari) and LENS Firenze (Dr M. Capitano) - Camogli (Italy). <https://n4m.mechanobiology.eu/2019.html>



- 2019 Co-organizer of the XXIII international school of the Italian society for pure and applied Biophysics on *Emerging tools in biomechanics* - Planned for early February 2019, Venice (Italy).
- 2018 Co-organizer of the third International Camogli Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with ETH Zürich (Dr Aldo Ferrari) and I.F.O.M. Milano (Prof. G. Scita) - Camogli (Italy). <https://n4m.mechanobiology.eu/2018.html>
- 2017 Co-organizer of the second International Camogli Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with ETH Zürich (Dr Aldo Ferrari) and Politecnico di Milano (Prof. M. Raimondi) - Camogli (Italy). <https://n4m.mechanobiology.eu/2017.html>
- 2016 Co-organizer and conceiver of the first International Camogli Symposium on *Nanoengineering for Mechanobiology*, organized in collaboration with ETH Zürich (Dr Aldo Ferrari) - Camogli (Italy). <https://n4m.mechanobiology.eu/2016.html>
- 2014 Organizer of the XVIII international school of the Italian society for pure and applied Biophysics on *Nanomechanics of Biomolecular Adhesion* - Venice (Italy).
- 2013 Organizer of the COST training School *AFM in Biology - a Focus on Marine Biology* supported by the COST action TD0906 and the CNR - Genova (Italy).
- 2013 Organizer of the workshop on Education in AFM of the COST action TD1002. Camogli (Italy).

Outreach

- 2018-2019 Design and realization of the "Biophysics box", a set of educational experiments for students to be included in a portable box (part of the "Science in a Box" project of the CNR).
- 2018 Coordinator and organizer of the national edition of the "Biophysics Week" for the National Research Council; event organized in response to the call of the Biophysical Society, to take the question "What's Biophysics" to the general public. Organization of Scientific Cafés, conferences and laboratories in 6 Italian cities.
- 2017 Coordinator of the participation of the Institute of Biophysics to the second "Biophysics Week", promoted by the Biophysical Society, to take the question "What's Biophysics" to the general public. Organization of Scientific Cafés, science concerts and laboratories.
- 2016 Organizer and promoter of the first "Biophysics Week", conceived by the Biophysical Society, to take the question "What's Biophysics" to the general public. Organization of Scientific Cafés, science concerts and laboratories.
- 2015 Participation with an educational laboratory and one special event to the Festival della Scienza di Genova, international science festival held in Genova every year
- 2015 Speaker at the Festival della Scienza di Genova, international science festival held in Genova every year. Title "*Art and Science: a delicate balance between good and bad bacteria*"
- 2015-Present Design and joint execution of science and technology projects for a technical college

- 2012-Present Execution of laboratories for toddlers and kids at primary schools, teaching the concept of measurement, motion, energy.
- 2008-Present Active member of the ScienzaLudica.IT staff, a website collecting educational experiments and projects build up on top of LEGO mechanical components and animated by the Mindstorm intelligent Brick.
- 2010 Educational laboratory at the Festival della Scienza di Genova, international science festival held in Genova every year
- 2010 LEGO-based science and technology exhibit at the European Science Open Forum, Torino, Italy
- 2009 Educational laboratory at the Festival della Scienza di Genova, international science festival held in Genova every year

Editorial activities

- 2022 Guest editor of Biomaterials Advances
- 2021 Guest editor of the Methods Collection "Methods for Unveiling Mechanics in Mechanobiology" on JoVE
- 2021 Guest editor of the special issue "Cell and Matrix Biomechanics in Physiology and Pathology" on Nanomaterials, MDPI
- 2019-Present Member of the editorial board of Biophysical Reviews, Springer
- 2019 Guest editor of the special issue "Nanoengineering for Mechanobiology" on Biophysical Reviews, Springer
- 2013-Present Member of the editorial board of Scientific Reports, Nature Publishing Group
- 2009-Present Reviewer for international journals: Nano Letters, Review Scientific Instruments, Applied Physics Letters, PLOS ONE, IEEE Transactions on BioNanoScience, IEEE Transactions on Nanotechnology, Biophysical Chemistry, Scientific Reports, Nanoscale, European Biophysics Journal, Colloids and Surfaces B: Biointerfaces, Advanced Photonics Research

Main Conference Abstracts and seminars

- 2023
- Invited seminar at University College Dublin (Prof Benedetto), December 2023
 - Speaker at the Animal-Free Research UK conference, Cambridge, UK, October 2023 **[INVITED]**
 - Invited seminar at the University of Leeds (Prof Beech), April 2023
 - Speaker at the EuroMech Colloquium "CELLULAR MECHANOBIOLOGY AND MORPHOGENESIS", Sirmione, Italy, August 2023 **[INVITED]**
- 2022
- Speaker at the International Symposium for Mechanobiology, Sydney, Australia, November 2022
 - Speaker at the "MBI Layover symposium", Singapore, November 2022, **[INVITED]**
 - Speaker at the FEBS Advanced Lecture Course "Biological Surfaces and Interfaces: Forces at biological interfaces" Sant Feliu de Guixols, Spain, June 2022 **[INVITED]**



- 2021
- Speaker at the 5th BioBrillouin Meeting (BBM5) online, October 2021 **[INVITED]**
 - Speaker at OPSP2021, online, April 2021 **[INVITED]**
- 2018
- Lecturer at the International Biophysics School "Academician Radoslav K.Andjus" (NERKA) on Mechanobiology, Kotor, Montenegro, October 2018 **[INVITED]**
 - Plenary speaker at the 8th Regional Biophysics Conference (RBC 2018), Zreče, Slovenia, May 2018 **[PLENARY]**
- 2017
- Invited seminar at University of Genova (Italy), Department of Mathematics; host: Prof Michele Piana
 - Technical Lecturer at the International School on Computational Microscopy 2017 on "Label free and quantitative phase imaging techniques", Amalfi, Italy, September 2017 **[INVITED]**
- 2016
- Invited seminar at University of Southampton (UK); host: Dr Dario Carugo
 - Invited seminar at Queensland University of Technology (Brisbane, Australia); host: Prof. Nunzio Motta
 - Invited seminar at Victor Chang Cardiac Research Institute (Sydney, Australia); host: Prof. Boris Martinac
- 2015
- Invited seminar at INLN, Université de Nice-Sophia Antipolis (Nice, France); host: Prof. Gian Luca Lippi
 - Invited seminar at CNR-ISASI (Napoli, Italy); host: Dr. Pietro Ferraro
 - Nano-bio imaging workshop, Bologna (Italy) April 2015 **[INVITED]**
 - National congress of the Italian Physical Society - Rome (Italy) September 2015 **[INVITED]**
- 2014
- 2014 Fall Meeting of the European Materials Research Society - Warsaw (Poland) September 2014 **[INVITED]**
 - National congress of the Italian Physical Society - Pisa (Italy) September 2014 **[INVITED]**
- 2013
- Workshop Science through Scanning Probe Microscopy 2013 - StSPM'13; Dynamical stability of ovalbumin can provide insights into the molecular basis of serpinopathies; Bologna 12-13/12/2013, Italy **[INVITED]**
 - Macromolecular crowding effects in cell biology: models and experiments; Comparing natural and artificial crowding in chicken eggs; Orléan, France, 24-25/10/2013 **[INVITED]**
 - FisMat 2013; Dynamical stability of ovalbumin can provide insights into the molecular basis of serpinopathies; Milano 9-13/9/2013, Italy
 - SPIE ; Characterization of a bioinspired elastin-polypropylene fumarate material for vascular prostheses applications ; München, Germany, 13-16/05/2013

- 2012 ○ XIV Linz Winter workshop, Linz (Austria), 3-7 February 2012, Multiscale characterization of a chimeric biomimetic polypeptide for stem cells scaffolding
- 2011 ○ Convention of the Italian Cystic Fibrosis Foundation, November 2011, Verona (Italy); Direct visualization of CFTR conformation by atomic force microscopy imaging
 - 3rd Multifrequency AFM Conference Madrid (Spain), March 14-15th, 2011, Self oscillating mode in air and liquid: a multimodal analysis
- 2010 ○ International Meeting on AFM in Life Sciences and Medicine; May 12-15, 2010, Red Island (Croatia); Characterization of self-oscillating Soft Imaging by means of photothermal excitation
- 2009 ○ 1st He Di SC Workshop, July 2009, Lugano (Switzerland); RTAI-XML: A web services approach to real-time control system [**INVITED**]
 - BioStruct09, ESF Workshop on Unraveling the structure of biomolecules: from nonequilibrium statistical mechanics to mechanical manipulation, Firenze (Italy), 02/2009 [**INVITED**]
 - 2nd Multifrequency AFM Conference; Madrid (Spain), June 2009; Modelling and analysis of autonomous micro-cantilever oscillations
 - XI International Scanning Probe Microscopy Conference, June 2009, Madrid (Spain); Determination of physical properties of an elastomeric polymer by AFM stretching experiments
- 2005 ○ Exploring the free energy landscape of a folded protein by means of AFM stretching experiments, 15th IUPAB & 5th EBSA International Biophysics Congress, Montpellier (France), 08/2005
- 2004 ○ Protein folding: theoretical description of AFM stretching experiments, workshop "Theoretical Physics in Quantitative Biology", Univ. Bicocca Milano, 09/2004 [**INVITED**]

National and international Patents

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Additional info

- 2021 Review panel member for CRUK
- 2018 Reviewer of R&D projects for Emilia Romagna Region

- 2016 Reviewer for the Human Frontier Science Program (HFSP)
- 2013-Present H2020 European Reviewer
- 2015-Present Grant reviewer for the Alzheimer's association
- 2015-2018 Expert reviewer of the Italian Ministry of Economy (MISE) for Research and Innovation projects
- 2014-2016 Project Reviewer for the Hungarian National Research, Development and Innovation Office (NKFIH)

— Languages

Italian [Native], **English** [Fluent], **French** [Good], **German** [Basic]



Publications in international journals

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