

Prof. Dr. Manuela Teresa Raimondi

Personal information

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Brief presentation

I am currently a full professor of Bioengineering. In 2003-2008 I have activated and directed a Biomechanics lab inside the research hospital IRCCS Galeazzi Orthopaedic Institute in Milano. Since 2009 I established the group of Mechanobiology at Politecnico. I have activated and I direct two labs at the campus Leonardo (the “[Mechanobiology lab](#)” and the “[Live Cell Imaging lab](#)”) in which I based my team. We develop frontier tools for research in biology, such as nanoengineered stem cell niches, microfluidic bioreactors and miniaturised windows for imaging in live animals. Our long-term goal is to develop the potential of these tools in cell modelling, drug discovery and regenerative medicine. I teach the course “Technologies for regenerative medicine” at the MS program in Biomedical Engineering. I am the principal Investigator of 3 projects funded by the European Research Council (ERC), one ERC-CoG of fundamental research in stem cell bioengineering and two ERC-PoC on technology transfer of the tools developed within the primary project. I am also founding a start-up company to commercialise these tools.

Key career information

- University degree: 1993, 5-year Master of Science (MS) in Mechanical Engineering, School of Engineering, Dept. of Bioengineering, Politecnico di Milano, Italy. Track: Bioengineering.
- Ph.D. title: 2000, Ph.D. in Bioengineering, School of Engineering, Dept. of Bioengineering, Politecnico di Milano, Italy. Title of the thesis: “The biomechanical reliability of artificial hip joints”.
- Academic position: 2018-, Full Professor of Bioengineering, School of Engineering, Politecnico di Milano, Italy.
- Grant management: Principal Investigator of 9 competitive grants in the field of Industrial Bioengineering, 3 of which funded by the European Research Council (ERC); total funds managed 2.8 Million Euro.
- Industrial research: holder of 4 contracts, total funds managed 0.32 Million Euro.
- Honors and Awards: I won a startup competition, 1 PhD fellowship, 1 young investigator award and 3 travel grants.
- Scientific appointments: Board member of the Italian Society of Bioengineering (GNB) and Scientific advisory board member of IRCCS Galeazzi Orthopedic Institute, the biggest orthopedic research hospital in Milano, Italy
- Academic appointments: Lecturer, Degree courses “Technological Evaluation of Prostheses and Implantable Devices” and “Reconstructive Engineering in Orthopaedics”; MS courses “Biomimetics and Tissue Engineering” and “Technologies for Regenerative Medicine”; PhD courses “Bioreactors for Regenerative Medicine” and “Mechanobiology”; Scholar of the discipline “Artificial organs and prostheses”; didactic coordinator of the MS program “Engineering in Surgery”; vice-coordinator of the PhD program in Bioengineering
- Grant peer review: External Reviewer for the European Research Council (ERC), the European Commission, the American National Science Foundation (NSF), the Dutch technology Foundation and the Portuguese Science and Technology Foundation.
- Membership to scientific societies: European Society for Artificial Organs (ESAO), European Society of Biomechanics (ESB) and Tissue Engineering and Regenerative Medicine International Society (TERMIS).
- Supervision: 9 doctoral candidates, 11 post-doctoral fellows, 1 visiting PhD student and 1 visiting Professor.
- Professional appointments: Technical consultant of the public prosecutor in 4 suits for the failure of implantable heart valves and hip prostheses; hip product manager at Zimmer-Biomet, the world leader industrial manufacturer of orthopaedic endoprostheses.
- Scientific Editing: Section Editor, area Tissue engineering, Regenerative medicine and Tissue Transplantation, *International Journal of Artificial Organs* (SAGE); Advisory Editor, *Journal of Immunology and Regenerative Medicine* (Elsevier), Review Editor, area Nanobiotechnology, *Frontiers in Bioengineering and Biotechnology*, *Frontiers in Materials*, *Frontiers in Molecular Biosciences*, Peer Reviewer of 16 Journals with Impact Factor.
- International Publications: 10 patent applications (5 granted), 80 articles on ISI journals, 2 books, 8 book chapters, 102 Conference proceedings; current H-index: 29 (Google Scholar, June 2019).
- Conferences: Program Chair of 2 conferences, Organizer of 5 symposia, 22 invited talks (2 Keynote).