



**Politecnico
di Torino**

Department
of Mechanical and
Aerospace Engineering

Curriculum Vitae Umberto Morbiducci

UMBERTO MORBIDUCCI is a Full Professor of Industrial Bioengineering in the Department of Mechanical and Aerospace Engineering at Politecnico di Torino, Turin, Italy. He holds a Master-degree in Electronic Engineering from the University of Rome “La Sapienza” and a PhD in Mechanical Engineering from Università Politecnica delle Marche, Italy. He has worked for 5 years as a researcher at the Italian National Institute of Health.

From 2018 to 2021, he served as Coordinator of the Bachelor and Master programs in Biomedical Engineering at Politecnico di Torino. Until 2023, he has been member of the governing board of PoliTo^{BIO}Med Lab, the Interdepartmental Center for Biomedical Engineering at Politecnico di Torino. Since 2023, he has served as a member of the Committee for the National Scientific Qualification (ASN) in Biomedical Engineering professorship.

He has held key roles in numerous scientific research projects at international, national, and regional levels. Additionally, he has been leading the Biomedical Simulation Lab since 2012. Since 2012, he has supervised more than 20 PhD students, 10 postdoctoral research fellows, and over 200 MSc students.

In addition to his teaching responsibilities—including courses on Biofluid Mechanics, Computational Fluid Dynamics, Cardiovascular Biomechanics, Bioreactors, and Artificial Organs—Umberto Morbiducci is actively engaged in research and administrative obligations at Politecnico di Torino, where he is currently member of the governing board of the Department of Mechanical and Aerospace Engineering.

He has been visiting scholar at the University of Toronto, Toronto, Canada, and at the Beihang University, Beijing, China.

He has also contributed to academic publishing, serving as an editor for several prestigious journals: Journal of Biomechanics (Associate Editor); Annals of Biomedical Engineering (Associate Editor); Frontiers in Cardiovascular Medicine - Pediatric Cardiology (Associate Editor); Scientific Reports (Associate Editor). Additionally, he has been a member of the Editorial Boards of the international journals Computers in Biology and Medicine, and Mathematics. He has served as a track/session chair and organizer at more than 20 international and national conferences.

As a peer reviewer, he has evaluated over 350 manuscripts for more than 90 scientific journals spanning all continents. He has served as research programs evaluator for the following institutions: Natural Sciences and Engineering Research Council of Canada (NSERC), CA; Fonds Wetenschappelijk Onderzoek, FWO, BE; Lise Meitner-Program (Austrian Science Fund), AU; Biotechnology and Biological Sciences Research Council (BBSRC), UK; Italian National Institute of Health (ISS), I; FINPIEMONTE, I; Swiss National Science Research Foundation (SNSF), CH; British Heart Foundation (BHF), UK; United States-Israel Binational Science Foundation (BSF), IL.

Since 2023 he has been advisor of the Italian Ministry of Health on clinical trials of medical devices.

His research activities have concentrated upon in silico, in vitro, and in vivo cardiovascular fluid mechanics, design and characterization of medical devices, biotransport phenomena, multiscale modelling from the atomistic scale to the continuum, cardiovascular engineering. He has an extensive publication record, with over 450 works to his name, including 205 articles published in peer-reviewed international journals.

In 2018, he has been honored with the Jack Perkins Prize by the Institute for Physics and Engineering in Medicine (IPEM).

ResearchGate profile - <https://www.researchgate.net/profile/Umberto-Morbiducci>

Google Scholar profile - <https://scholar.google.it/citations?user=1QbyZ1gAAAAJ&hl=it>

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