

Edoardo Bemporad

Full Professor of Materials Science and Technology at the University of Rome "Roma Tre", Engineering Department.

Curriculum Vitae

Born in Rome in 1965, Edoardo Bemporad is graduated in Nuclear Engineering and received a Ph.D. degree in Materials Engineering at the University of Rome "La Sapienza" in 1995. He was employed at the Italian National Research Council (CNR) with a position as a Technology Transfer Specialist from 1991 to 1995 and then he was appointed as an Assistant Professor at the Department of Mechanical and Industrial Engineering, University "Roma Tre", where he became Full Professor in 2005.

Since 2018 he is a Consultant of the Italian Ministry of University and Research for EC Structural Funds and National Recovery and Resilience Plan.

In 2024 he has been appointed as a member of the Technology Council for advanced Materials, Italian high-level representative.

He is lecturer of several courses related to Materials Science and Technology and has been advisor of several PhD/master/bachelor's degree theses.

Coordinator of the PhD Course in Mechanical and Industrial Engineering of the University Roma Tre 2008-2020, coordinator of the Mechanical and Industrial Engineering section, Department of Engineering - University "Roma TRE", 2021-2022, Coordinator of the Aeronautical, electrical and Materials Engineering section, Department of Civil, Computer Science and Aeronautical Technologies Engineering - University "Roma TRE", 2022 - 2024

Invited professor at the University of Science and Technology of Lille to the Laboratory of Mechanics Unit 8107 of CNRS (National Scientific Research Center) and Peer Reviewer for several scientific journals such as: Surface & Coatings Technology, Vacuum, Journal of Materials Science, Thin Solid Films, Journal of Thermal Spray Technology, Journal of Materials Research.

He is an expert in the research fields of surface engineering, thin films technology, and nano-mechanical characterization of small-scale structures and micro-devices; author of more than 134 papers published in international and national journals and refereed conference proceedings with an h-index of 33 and more than 3300 citations. Acting also as a Court consultant for Failure Analysis issues.

Coordinator of several research projects with public and private funds (national and international), manages the activities of the Materials Science and Technology group of the University. The scientific research activities are focused on modelling, measurements and mechanical characterization of advanced interfaces and single and multi-layer nanostructured coatings, thick and thin, for either anti-wear and anti-corrosion applications at low and high operating temperatures, with particular attention on the development of advanced methods for microstructural characterization and modelling of the mechanical properties. Mentor and Co-Mentor of more than 45 works of master's thesis and 7 doctoral dissertations.

Founded in 1995 and being Scientific Manager from 2005 of the University Laboratory of Electronic Microscopy (LIME). Among other minor facilities, the laboratory hosts two DualBeams (2010 and 2024), a SEM, a TEM and an atomic force microscope, a line of optical digital microscopy, an interference profilometer and confocal instruments for advanced sample preparation, instrumentation for mechanical characterization such as macro-micro-nano durometers, tribometers, 3D NanoScribe device, and other minor tools for instrumental property over 5 M €.

Peer Reviewer of international journals such as Surface & Coatings Technology, Vacuum, Journal of Materials Science, Thin Solid Films, Journal of Thermal Spray Technology, Journal of Materials Research.

Expert evaluator for numerous Italian regions (Tuscany, Sardinia, Calabria, Puglia, Piemonte, Lombardia, Lazio) on calls for projects of basic research, applied, industrial research and experimental development, where, together with the period spent as CNR Technologist, has also gained expertise on issues of coordination of research, research interface - production world and technology transfer.

Member since 2004 of the Register of Technical Consultants of the Civil Court of Rome for the following subjects: metallurgy and steel industry; industrial installations; chemistry of metals, alloys and minerals; industrial constructions, habitually active as a materials expert in Failure Analysis and in Forensic Engineering.

Other former major appointments:

- Member of the Scientific Board of the "Molecular Design" department of the Italian National Research Council (CNR, www.dpm.cnr.it)
- Member of the advisory board of the Italian Interuniversity Consortium on Materials Science and Technology (www.instm.it)
- Member of the Management Board of the consortium MATRIS 2007-2020
- Member of the Management Board of the consortium "Roma Ricerche" (2011-2014)
- Italian Government representative for the STEEL TECHNOLOGY PLATFORM-ESTEP of the European Commission (<http://cordis.europa.eu/estep>).
- Member of the Management Board of the A4MI platform (Alliance for Materials Italia) 2012-2018
- Consultant for the Italian Ministry of Research and the Italian Ministry of Economic Development and other national and EU institution as an expert for R&D projects evaluation.
- Member of the Technology Council for advanced Materials, Italian high-level representative, 2024 - ...