

## Prof. Marcello Colledani

**Research experience and Academic Career:** Marcello Colledani was born in Milan on May 5<sup>th</sup> 1978. He graduated in Mechanical Engineering in 2003 at Politecnico di Milano. In May 2006 he classified first in the selection for a permanent position as Assistant Professor in the Mechanical Engineering Department at Politecnico di Milano. In May 2007 he received his Phd cum laude in Manufacturing Technology and Production Systems from Politecnico di Milano. Since November 2014 he holds a position as Associate Professor in the Mechanical Engineering Department at Politecnico di Milano. In 2008-2009 he spent 1 year as a visiting professor at the Laboratory for Manufacturing and Productivity LMP of the Massachusetts Institute of Technology MIT in US, carrying on research activity in collaboration with Prof. Stanley Gershwin. The research was sponsored by a Progetto Rocca grant. Since then, he regularly spends research periods at MIT, collaborating with Prof. Gutowski, of the Environmental Benign Manufacturing group, and Prof. Gershwin, every year. Since 2013 he is Research Associate of the Institute of Industrial Technology and Automation of the CNR (ITIA-CNR).

**Research activity:** His main research interests include the following areas: (i) Modelling, performance evaluation, design and reconfiguration of complex, evolving manufacturing systems; (ii) Modelling and design of de-and remanufacturing technologies and systems for the circular economy. Prof. Colledani is responsible for the “Mechanical Recycling Cell” that is one of the three divisions of the “Mechatronics De-manufacturing Pilot Plant” that was installed at ITIA-CNR in 2013. Since 2018, Prof. Colledani has the scientific responsibility of the Inter-departmental Laboratory “CIRC-eV: Circular Factory for the Electrified Vehicles of the Future” involving 7 Departments at Politecnico di Milano and focused on new technological solutions for testing, disassembly, and re-assembly of Li-Ion batteries from electrified vehicles of the future, in view of their second use in stationary applications. He is author of more than 100 papers in international journal, books and conferences, of which 50 in international journals or books.

### Membership of National and International Organizations

- Member of the Italian Association for Manufacturing Technology (AITEM).
- Associate Member of the CIRP - International Academy for Production Engineering.
- Affiliate Member of IFAC, International Federation of Automatic Control.
- Founding member of the European Cluster “4ZDM - Zero Defect Manufacturing”, EC DG RTD.
- Scientific Chairman of the MANUFUTURE Sub-platform on “Zero-defect Manufacturing”.
- Coordinator of the working group on "De-and Remanufacturing" at AFIL – Lombardy Region cluster on Intelligent Factory. For AFIL, he also coordinates the activities in the SCREEN H2020 project.
- Funding member of the Technical Committee TC "Sustainable Production Automation" in the IEEE Robotics and Automation Society.
- He is member of the scientific board of several International Conferences and he was co-organizer of the Conference on Stochastic Models of Manufacturing Service Operations in Italy, during the 2009 and 2017 editions.

**Research Projects:** He is Project Coordinator of 1 European H2020 project (FiberEUUse), one European network (Vanguard Initiative “De-and Remanufacturing for Circular Economy” and related DG REGIO pilot action), Scientific Coordinator of 2 European H2020 Projects (MuProD, ForZDM), Scientific Responsible for Politecnico di Milano in 9 FP7 and H2020 European Projects (MuProd, RLW Navigator, RobustPlanet, ProRegio, Recam, ForZDM, Focus, Productive 4.0, Iqonic), 1 Marie Curie H2020 International Training Network (Digiman) and 3 National Projects (Cluster Fabbrica Intelligente CFI – Sustainable Manufacturing project, WEEE Reflex, WEEE Reflex CPS).

**Scientific Awards:** In 2006 he received the Best Young Author Prize by the 12th IFAC Symposium on Information Control Problems in Manufacturing. In 2006 he received the Best Application Paper Award at the INCOM 2015. In 2006 he received the Best Poster Award at the CAE Conference 2015. In 2008 and 2011 his papers were awarded honorable mention finalists of the Young Author Prize at the IFAC World Congress. In 2013 he was panelist at “Maximising Impact & Successful Innovation Strategy” within the 2013 EU Factory of the Future Impact Workshop and in the 2018 Digital Innovation Hubs Conference in Warsaw, organized by EC DG CNECT.