Marco Cocconcelli

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CV

Marco Cocconcelli was born in Italy on November 9, 1977. He received the M.S. degree in mechanical engineering from the University of Bologna in 2003, defending a thesis on the kinematic and dynamic modeling of a human knee. He received the Ph.D. degree in applied mechanics from the University of Bologna in 2007, defending a thesis on the design of trajectories for planar manipulators having constant maximum position error.

In 2007 he joined the University of Modena and Reggio Emilia (UNIMORE), Reggio Emilia, Italy. He joined the research group led by Prof. Riccardo Rubini at the Department of Sciences and Methods for Engineering of UNIMORE on the subject of analytical and experimental vibratory analysis and signal processing. He participated as a researcher in several industrial research contracts, in international, national, regional and local research projects admitted for funding on the basis of competitive calls. The research activities of the group have resulted in collaborations with several companies in Italy (Tetra Pak, Ducati, CNH Industrial, Technogym, Sacmi, IMA, Fives-Oto, and others) and with research groups of other universities:
i) research group of Prof. Walter Bartelmus at the Wroclaw University of Science and Technology (Poland), developing algorithms for the diagnostics of rotating machines based on vibration analysis.
ii) research group of Prof. Giorgio Dalpiaz at the University of Ferrara (Italy), developing of innovative methods in the field of diagnostics of rotating machines.
iii) research group of Prof. Alberto Bellini at the University of Modena and Reggio Emilia, developing signal processing for the diagnostics of mechatronic systems and electrical machines.

From 2016 to 2018 he was assistant professor at UNIMORE and actually he is associate professor of Applied Mechanics at the Department of Sciences and Methods for Engineering (UNIMORE). He is responsible of a research group on issues of vibration analysis, monitoring, diagnostics and prognostics of mechanical systems, dynamic modeling of mechatronic systems and the control of servomotors for industrial robotic applications. To date, the research group has included: 3 doctoral students (one participating in a H2020-MSCA-ITN-2020 project funded by the European Community), 4 research fellows.
The research activities of the group have resulted in collaborations with various companies in Italy (Tetra Pak Packaging Solutions, Ferrari, FCA, Sacmi, GB Service Lab) and internationally (Siemens PLM - Belgian company). In this period, the research activities have produced collaborations with important research groups of national and international universities:

i) research group led by Prof. Cécile Capdesuss at the PRISME Laboratory of the University of Orleans (Chartres, France), in the field of diagnostics of mechanical components in non-stationary operating mode; This collaboration included research periods at the PRISME laboratory (17/05/2020-18/06/2020, 17/05/2023-16/06/2023).
ii) research group led by Prof. Fabio Immovilli at the University of Modena and Reggio Emilia, on the experimental investigation of the diagnostics of electric motors;
iii) research group led by Prof. Fabrizio Pancaldi at the University of Modena and Reggio Emilia, on the modeling the expected vibration signal of mechanical components and the development of advanced signal analysis techniques.
iv) research group of Prof. Emiliano Mucchi at the University of Ferrara, in the field of vibrational diagnostics of rotating machines.
v) research group of Prof. Nicola Sancisi at the University of Bologna, on the experimental detection of the articular angles of the lower limb in the squot and sitting movement (biomechanics);
vi) research group of Prof. Andrea Spaggiari at the University of Modena and Reggio Emilia, in the field of the experimental characterization of the transfer function of structural adhesives.
vii) research group of Prof. Marco Ceccarelli at the University of Rome “Tor Vergata”, in the field of the history of mechanisms and machine science.
viii) research group of Prof. Cristina Castejon at the University of Madrid “Carlos III”, in the field of the diagnostics of train axles.

He gives lectures on Applied Mechanics, Kinematics and Dynamics analysis of mechanical systems, Multibody analysis. He has been supervisor of more than 100 bachelor and master thesis on vibration analysis and diagnostics of mechanical components. He holds three international patents on condition monitoring of ball bearings for packaging machines working in non-stationary conditions.

He is co-author of about 150 papers on vibration-based condition monitoring of mechanical components, published on international scientific journals and in proceedings of international conferences. He is an active reviewer for more than 35 different international journals on the field of condition monitoring, mechanics of vibrations, sensoring, dynamics modeling and simulation. He is a member of the Editorial board of the journal Shock and Vibration. He is member of the council of the Doctorate School in Industrial Innovation Engineering of UNIMORE.

He is responsible for Unimore of the MSCA-ITN-2020 — Marie Skłodowska-Curie Innovative Training Networks (ETN) project named “Monitoring of large scale complex technological systems” (955681 - MOIRA), constituted by 12 Universities and 4 Industries.

BIBLIOMETRIC INDICATORS RELATED TO PUBLICATIONS AND CITATIONS
SSD: IIND-02/A Applied Mechanics (ex ING-IND/13)
Scopus: documents: 83, h-index: 13, citations: 891
Google Scholar: documents: 147, h-index: 18, citations: 1442

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