



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **Giovanni MORONI**

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Nationality Italian

Date of birth 17th September 1964

Work experience

Dates 2005-present

Occupation or position held Full Professor in Manufacturing and Production Systems, Department of Mechanical Engineering

Main activities and responsibilities Head of Manufacturing and Production Systems Research Line, Department of Mechanical Engineering, Politecnico di Milano [since 2008]

Member of the Scientific Committee of the Department of Mechanical Engineering, Politecnico di Milano [since 2013]

Member of the School of Industrial and Information Engineering, he is in charge of courses in Bachelor and Master of Science degree programmes in both "Management, Economics and Industrial Engineering" and "Automation Engineering" degree courses of Politecnico di Milano.

He is currently teaching the following courses:

- Manufacturing and Quality (10 ECTS, since 2005);
- Precision Manufacturing (10 ECTS, since 2012);
- Manufacturing (10 ECTS, since 1998).

Previously:

- He taught the following courses at Politecnico di Milano or at Cassino University: Rapid Manufacturing, Computer Aided Manufacturing, Industrial Quality Management, and Production Management and Control;
- He was member of the Board of the PhD Programme in Manufacturing and Production Systems at Politecnico di Milano (2000-2008).
- Member of the Board of the Department of Mechanical Engineering, Politecnico di Milano (2000-2012)

Name and address of employer Politecnico di Milano

Type of business or sector Education and Research

Dates 2000-2005

Occupation or position held Associate Professor, Department of Mechanical Engineering

Name and address of employer Politecnico di Milano

Type of business or sector | Education and Research
 Dates | 1999-2000
 Occupation or position held | Research assistant, Department of Mechanical Engineering
 Name and address of employer | Politecnico di Milano
 Type of business or sector | Education and Research
 Dates | 1995-1999
 Occupation or position held | Research assistant, Department of Industrial Engineering
 Name and address of employer | University of Cassino (Italy)
 Type of business or sector | Education and Research
 Dates | 1993-1995
 Occupation or position held | Visiting Researcher, Programmable Automation Laboratory of the Institute for Robotics and Intelligent System, University of Southern California, Los Angeles, USA
 Name and address of employer | Fellowships granted by University of Cassino and by National Research Council of Italy
 Type of business or sector | Education and Research

Education and training

Dates | 1983-1991
 Title of qualification awarded | Laurea cum laude in "Management, Economics and Industrial Engineering"
 Name and type of organisation providing education and training | Politecnico di Milano (Italy)
 Level in national or international classification | MSc Equivalent

Personal skills and competences

Mother tongue(s) | ITALIAN

Other language(s)

Self-assessment

European level (*)

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent User	B2	Independent User	B1	Independent User	B1	Independent User	B2	Independent User

(*) Common European Framework of Reference for Languages

Fluency in English, being able to work and produce reports in English.

Specific competences and research activities

Prof. Moroni's scientific work is mainly carried out in the field of zero defects and rapid manufacturing. In more detail, research activities address:

- Geometrical Metrology and Reverse Modeling;
- Manufacturing Geometrical Errors and Tolerance Design;
- Process Planning, Digital/Virtual Manufacturing.

Prof. Moroni is author/co-author of more than 120 publications, most of which published on peer-reviewed journals or presented at international conferences, and he has spent a large amount of time

lecturing and consulting to industry in Italy and in foreign countries.

From 2008 to date he is leading the Manufacturing and Production Systems research group of the Mechanical Engineering Department, consisting of 15 people as academic staff and several non-permanent researchers and PhD students (about 30 researchers).

This research line aims at designing and developing new technological solutions for future transformation processes. Several research topics are developed within this particular framework. The mechanical and technological characteristics of transformed materials and the relationships between the material characteristics and the transformation process parameters are investigated. This knowledge facilitates the setting-up of new production processes, the selection of technological variables for the running of cost-effective programmes in changing environments and the development of physical prototypes based on innovative transformation processes, also considering the environmental impact: use of energy, materials, and process emissions.

The methodologies and tools for the design, management and control of production processes as well as components and systems for transformation activities are conceived, designed and developed using software tools. The use of these advanced tools will not only help industrial engineers to achieve optimum design of production systems but will also improve management and control procedures.

The research line is organized into two main group, namely "Manufacturing Processes" and "Manufacturing Systems and Quality", respectively dealing with the following main subjects:

1. Conventional manufacturing processes, Micromachining, Laser manufacturing processes, Water Jet / Abrasive Water Jet cutting, Ultra sound welding and Plasma cutting, Metal foam manufacturing, and Energy saving in manufacturing processes;
2. Quality in manufacturing and continuous improvement, Tolerancing, geometrical metrology and reverse modelling, Configuration/reconfiguration of manufacturing systems, Performance evaluation of manufacturing systems, Short term production planning of manufacturing systems, Resource planning in health care systems, and Digital manufacturing.

Roles in Research Projects:

Principal Investigator for the Politecnico di Milano in the Italian MSE - Industria 2015 – Sustainable Mobility funded research project "FlexProd – Flexible and Eco-Efficient Production Systems for Tyred Vehicle Manufacturing" (Dec. 2011/ Nov. 2014), coordinated by COMAU SpA;

Member of the Manufacturing and Production Systems research unit of Mechanical Engineering Department of Politecnico di Milano in the Lombardy Region funded project "ST.I.M.A. – Hybrid Structure for Mechanical and Aeronautical Applications" (Feb. 2011/ Jan. 2013), coordinated by Professor F. Resta;

Member of the the Manufacturing and Production Systems research unit of Mechanical Engineering Department of Politecnico di Milano in the Lombardy Region funded project "REMS – Lombardy Network of Excellence for Machinery and Extended Lab" (Feb. 2011/ Jan. 2013), coordinated by CSMT Scarl;

Principal Investigator for the Politecnico di Milano in the MIUR-PRIN 2008 Project "Large-scale coordinate metrology: study and realization of an innovative system based on a network of distributed and cooperative wireless sensors" (Mar. 2010/ Sept. 2012), National Coordinator Professor F. Franceschini;

Member of the Politecnico di Milano Research Group in the MIUR-FIRB 2006 Project "Enabling technologies for high added value manufacturing products and processes" (July 2007/June 2010), National Coordinator Ing. E. Carpanzano;

Principal Investigator for the Politecnico di Milano in the MIUR-PRIN 2005 Project "Characterization of the multiscale geometry of manufactured surfaces for process control and tolerance analysis" (Jan. 2006/ Jan. 2008), National Coordinator Professor R. Groppetti;

Member of the Politecnico di Milano Research Group in the MIUR-PRIN 2002 Project "Measurement Quality with Coordinate Measuring Machines in Production Processes" (Dec. 2002/ Dec. 2004), National Coordinator Professor R. Levi.

Additional information

Other Positions and Responsibilities

Associate Member of CIRP, The International Academy for Production Engineering (since 2012)

Member of the Italian Association for Manufacturing - A.I.Te.M. (since 1995)

Member of the Scientific and Technical Committee of MUSP Lab - Machine Tool and Production Systems Consortium belonging to Emilia Romagna Region High Technology Network (he is in charge

of "Area 2: Precision Engineering" since 2006)

Member of the Advisory Board of TeSeM Observatory (Technologies and Services for Maintenance) of the School of Management of Politecnico di Milano (since 2010)

Member of the EMIRAcle Association (since 2008), former member of the European Network of Excellence VRL-KCiP "Virtual Research Lab for a Knowledge Community in Production" (2004/08)

Member of the delegations of the Italian Ministry of Foreign Affairs at:

- the Israel-Italy Bi-National Conference on Measurements and Uncertainty Evaluation in Coordinate Measuring Machine (CMM) and Scanners and their Implication on Design and Reverse Engineering, Technion - Haifa, November 29-30, 2004, invited speaker;
- the Israel-Italy Bi-National Conference on Shape Modeling and Reasoning for Industrial and Biomedical Applications, Technion - Haifa, May 7-9, 2007, invited speaker.

Prize/Awards

UCIMU Prize 1992 for his Laurea degree thesis ("UCIMU-Sistemi per produrre" is the Association of Italian Manufacturers of Machine Tools, Robots, Automation Systems and ancillary products).

Italian National Research Council (CNR) award 1996 for the research activities done under CNR grant at the Programmable Automation Laboratory (PAL) of the Institute for Robotics and Intelligent System, University of Southern California, Los Angeles, USA.

Best Paper Award at the 14th Int. Conference on Jetting Technology, Bruges, Belgium, September 21-23, 1998.

Milano, 23/09/2013