

## SHORT PROFILE

M.Sc. in Nuclear Engineering, Ph.D. in Engineering of Materials and Post-PhD in Reliability&Safety in Industrial Applications at the University of Bologna. He has been assuming several roles inside this and other Higher Education Institutions throughout Europe. In his actual position of Assistant Professor in Bologna, he has performed an intense teaching activity in courses related to the topics of Industrial Engineering as Engineering of Industrial Products; Advanced Techniques for Design of Machines; Elements of Design of Machines; Security and Reliability of Mechanical Systems; Functional and Aesthetical Design of Systems. As Contract Professor, he performed academic courses on similar topics in Milano and Reggio Emilia (Italy), Belgrade and Kragujevac (Serbia), Rijeka (Croatia), Sofia (Bulgaria). As Contract Researcher, he has been implementing a constant and fruitful research activity focused on Innovative Materials, both at the levels of scientific investigations and industrial innovation. Author of more than 250 contributions between scientific articles and industrial memories. He participated to more than 60 congresses and workshops all over the World and over 20 invited lectures. He is also very active in Transfer of Technology actions for the benefit of local and international enterprises, including SMEs and start-ups, also considering training courses in industrial engineering. In addition, he has been assuring a continuous action in fund raising, assuring about 8M€ as total income, for start-ups establishment, joint R&D projects and internationalisation, and in project management within national and EU funded research/collaborative projects. He took relevant parts, as coordinator, supervisor or main investigator, in more than 25 international projects and over 40 national actions. Finally, since 2009, he is external evaluator and expert for the EU Commission, the Italian Ministry of Economic Development, and other national and foreign Institutions involved in the regional development worldwide (such as Serbia, Kazakhstan, Poland, Denmark, Turkey, Brazil, Azerbaijan). He globally evaluated more than 300 R&S projects in the years, supervising the implementation of some of them, including very large actions, both for the Italian Government and EU Commission. Since 2017, he has been assigned of various relevant roles inside the Italian Ministry of Education, Universities and Research, as senior expert at the service of General Directorate for Research in relation to the EU funding programmes (as National Operative Programmes) where, in team with other experts, he took care of the closing phases of the EU programmes and their reporting. These experiences, together with the participation in several Scientific Committees, have permitted him to establish a wide experience in projects & programmes evaluation or management and a large network of professional relations. Finally, he has the National Scientific Qualification for the sectors 'Industrial Design, Mechanical Construction and Metallurgy' (Full Professor) and 'Aeronautical, Aerospace and Naval Engineering' (Associate Professor),

## EDUCATION

2001 January - 2004 April

**PhD Degree in Mechanics of Materials**University of Bologna, Doctoral School in Mechanics of Materials [<http://www.unibo.it>]

- Thesis: "*Reliability and Safety of Industrial Systems*" passing mark of 100 on 100

1991 September - 1999 March

**M. Sc. Degree in Nuclear Engineering**

University of Bologna, Faculty of Engineering

- Thesis: "*Calibration of an ionic beam using nuclear resonances energy*" passing mark of 110 on 110 performed at the Italian National Council of Research (CNR) [<https://area-new.bo.cnr.it/en/>]

1987 September - 1991 July

**High School Degree in Science**Second Level College of Science "L. Da Vinci", Pescara (Italy) [<http://www.liceodavincipescara.it>]

## TRAINING

- 2012 July – 2014 December **Industrial Scholarship in Design and Optimisation of Production Machines**  
 SCM Group Spa, a global leading manufacturer [<https://www.scmgroup.com/en>],  
 funded by Province of Siena / Monte dei Paschi di Siena
- 2005 January – 2008 December **Post-PhD equivalent Scholarship in Maintainability of Industrial Systems**  
 University of Bologna, Dept. of Industrial Engineering
- 1999 July – 2001 November **Researcher Scholarship on Reliability and Maintainability**  
 Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA)  
<http://www.bologna.enea.it>
- 1998 July – 1999 May **Internship on Physics and Matter Technologies**  
 Laboratory of Chemistry and Technology of Materials and Components for Electronics (now Institute of Microelectronics and Microsystems) of the National Research Council (CNR) in Bologna.

## PERSONAL SKILLS

## Languages

Italian (Mother tongue); English (C1); Serbian (beginner)

## MAIN WORK EXPERIENCE

- 2011 July – present **Senior Researcher / Principal Investigator**  
 Alma Mater Studiorum University of Bologna
- ✓ Department of Industrial Engineering [<https://ingegneriindustriale.unibo.it/>]
  - ✓ Interdepartmental Centre for Industrial Research in Advanced Applications in Mechanical Engineering and Materials Technology [<http://www.mam.unibo.it/>]
  - ✓ Interdepartmental Centre for Industrial Research in Aerospace [<https://centri.unibo.it/aerospace>]
  - ✓ Department of Agricultural and Food Sciences [<https://distal.unibo.it/en>]
- 2017 July – 2020 June **Senior Scientific Consultant**  
 Ministry of Education, Universities and Research - Directorate General for Research Coordination, Promotion and Valorisation on Regional Development Fund (ERDF), European Social Fund (ESF), National Operative Programmes 2014-2020 and 2007-2014. [<http://www.miur.it>]
- 2005 January – 2011 December **R&S Lab Coordinator and Researcher**  
 National Research Laboratory of Advanced Mechanics and Materials (MATMEC)
- 2004 January – 2008 December **Coordinator and Contract Professor**  
 University of Bologna - Institute of Advanced Study (IAS) [<http://www.ias.unibo.it/>]
- 1996 September – 1998 June **Scientific Software Developer**  
 University of Bologna - Dept. Fruit Tree & Woody Plant Sciences [<http://www.agrsci.unibo.it/dicabo/>]
- 2006 June – present **Industrial Consultant**
- Enterprises: ABB, Alstom, Avio, Bonfiglioli, Ducati, Edison, Fiat Group, Ferrari, Loctite, Magneti Marelli, Scm Group, Zastava (RS), Aetna Robopack, Ancora, Faam, Nier Ingegneria, Ocean, Riba Composites and a large number of SMEs in Italy.
- Universities: Camerino, Chieti, Modena, Banja Luka (BiH), Belgrade (Rs), Berlin (D), Brasov (Ro), Braunschweig (D), Buenos Aires (Ar), Purdue (Us), Cranfield (Uk), Delft (NI), Hebrew (IL), Glasgow (Uk) Kotor (Mn), Kragujevac (Rs), Novi Sad (Rs), Nis (Rs), Podgorica (Mn), Rijeka (Hr), Rio Grande Do Sur (Br), Shanghai (Cn), Sofia (Bu), Wroclaw (Pl).
- R&D Centers: CNR, T3LAB, SUPSI (CH), C3M (SL), CEUB, Centro Ceramico Bologna, CNA, CRIT, ENEA, ERAMIAT (BE), Intrade (US)
- Start Up & Spin Off : more than 10 SMEs

## ACADEMIC ACTIVITY

2001 September – present

**Assistant Professor**

 University of Bologna - School of Engineering and Architecture [<http://www.engineeringarchitecture.unibo.it/en/>]

- Course in "Reliability and Safety of Mechanical Structures" (holder)– since 2013/14 to date
- Course in "Design of Machine" (co-holder) - 2004/05
- Course in "Elements of Machine" (co-holder)- 2003/04, 2004/05, 2005/06
- Course in "Product Engineering" (co-holder) - 2007/08, 2008/09, 2009/10
- Course in "Concepts and Methods for Machine Design" (co-holder) - 2002/03, 2003/04, 2004/05
- Course in "Reliability and Safety of Mechanical Structures" (co-holder) - 2009/10, 2010/11

 University of Modena and Reggio Emilia - Faculty of Engineering [<http://www.unimore.it/ateneo/ingegneriare.html>]

- Course in "Reliability and Safety of Mechanical Structures" (co-holder) - 2001/02, 2002/03

2003 September – 2011 June

**Teacher for Vocational Training**

- Professional Training Course in "Expert for Foundry Processes" (2010-2011)
- Professional Training Course in "Mechanical Designer in Industrial Automation" (2009-2010)
- Professional Training Course in "Wood Technology", Industrial Association Rimini Municipality (2002)
- Master Course in "Industrial Design", School of Industrial Design of Bertinoro, (2003/04)
- Master Course in "Italian Design Summer School", University Residential Centre of Bertinoro (2009)

2001 September – present

**Visiting Professor / Researcher**

- University of Belgrade - Faculty of Mechanical Engineering, Serbia
- University of Kragujevac - Faculty of Engineering in Kragujevac, Serbia
- University of Rijeka – Faculty of Mechanical Engineering, Croatia
- University of Montenegro – Faculty of Mechanical Engineering in Podgorica, Montenegro
- University of Rio de Janeiro – Faculty of Engineering, Brazil
- Technical University of Berlin, Germany
- Technical University of Delft, Nederland
- West of England (UWE Bristol), UK

## INVITED LECTURES

- 07.02.2007** **Faculty of Engineering, University of Bologna**  
*"Experimental analysis and FEM simulation for the geometry optimization of an automotive device"*
- 07.05.2007** **Faculty of Mechanical Engineering, University of Belgrade**  
*"Experimental tests and quality methodologies as a roadmap for the Industrial Design process"*
- 10.05.2007** **6th Imeko - Youth Symposium on Experimental Solid Mechanics, Vrnjačka Banja, Serbia**  
*"Experimental Testing Methods as Fundamental Approach for Improving The Reliability of Large-Mass Industrial Products"*
- 16.10.2007** **Polytechnic of Milano, IMAPS Congress**  
*"Theoretical and Experimental Methods as integrated approach to improve the reliability of mechatronic components in automotive industry"*
- 06.09.2009** **Higher School of Transport Todor Kableshkov di Sofia**  
*"Practical overview of tools and methods for the quality improvements in the transport industry"*
- 18.05.2009** **Faculty of Mechanical Engineering, University of Kragujevac**  
*"Design and manufacturing a testing machine for a fast application of complex fatigue loads"*
- 10.04.2010** **Institute for Advanced Studies, Bologna**  
*"How to improve Safety&Reliability in the Industrial Design"*
- 26.03.2010** **Faculty of Mechanical Engineering, University of Kragujevac**  
*"Theoretical and Experimental Methods for Reliability Improving of Automotive Devices"*
- 14.03.2010** **Serbian Academy of Science and Arts, Belgrade**  
*"Numerical Simulation for Investigating the Contact Problems in Industrial Life"*

## SCIENTIFIC COMMITTEES

## Editorial Boards

- **Facta Universitatis, Series: Mechanical Engineering.** [Q1]. University of Nis, Serbia. ISSN: 0354-2025. **(Co-Editor)**
- *Discover Mechanical Engineering.* Springer Nature, Switzerland. e-ISSN: 2731-6564
- **Engineering Science and Technology, an International Journal.** [Q1] Elsevier, Netherlands. e-ISSN: 2215-0986
- *FME Transactions.* University of Belgrade, Belgrade, Serbia. ISSN: 1451-2092.
- *International Journal of Quality Research.* U. of Montenegro and Kragujevac, ISSN: 1800-6450
- *International Journal of Engineering and Technology,* Science Publishing. ISSN: 2227-524X.
- *International Journal of Polymer Science,* Hindawy. ISSN: 16879430, 16879422
- *Journal of Marine Science and Engineering.* MDPI, Basel, Switzerland. ISSN: 2077-1312.
- *Metals.* [Q1] MDPI, Basel, Switzerland. ISSN: 075-4701
- *Military Technical Courier,* University of Belgrade. <http://www.vtg.mod.gov.rs/index-e.html>
- *Proceedings on Engineering Sciences,* CQM - Centre of Quality Management, Serbia. ISSN: 2620-2832
- *Reports in Mechanical Engineering,* Front Press. ISSN 2683-5894
- *Sci.* MDPI, Basel, Switzerland. ISSN 2413-4155

## Peer Reviewer (main journals)

- Acta Mechanica, Springer-Verlag GmbH Austria, part of Springer Nature: ISSN: 1619-6937
- Advanced Sustainable Systems, WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim: ISSN: 2366-7486
- Advances in Applied Ceramics. Taylor & Francis Group, London, UK. ISSN: 1743-6753 Online ISSN: 1743-6761
- Applied Science. Multidisciplinary Digital Publishing Institute Publication (MDPI). Basel, Switzerland. ISSN 2076-3417
- British Journal of Economics, Management & Trade (BJEMT). Science Domain International, London, UK, ISSN: 2278-098X
- Ciência & Tecnologia dos Materiais (Science & Technology of Materials). Elsevier. Amsterdam, NL, ISSN: 0870-8312
- Composite Structures. Elsevier. Amsterdam, NL, ISSN: 0263-8223
- Composites Part A: Applied Science and Manufacturing. Elsevier. Amsterdam, NL, ISSN: 1359-835X
- Composites Part B: Engineering. Elsevier. Amsterdam, NL, ISSN: 1359-8368
- Composites Part C: Open Access. Elsevier. Amsterdam, NL, ISSN: 2666-6820
- Engineering Science and Technology, Elsevier, Amsterdam, ISSN: 2215-0986
- Entropy, Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland, ISSN 1099-4300
- Facta Universitatis, Series: Mechanical Engineering. University of Nis. ISSN: 0354-2025
- FME Transactions. Belgrade University, Belgrade, Serbia. ISSN: 1451-2092
- Industrial Crops and Products. Elsevier. ISSN: 0926-6690
- International Journal for Quality Research, Publisher: Center for Quality Montenegro. ISSN: 1800-6450
- International Journal of Energy Applications and Technologies. Dergi Park Akademik, Turkey. eISSN: 2548-060X
- International Journal of Environment and Pollution. Inderscience Pub.. ISSN: 1741-5101
- International Journal of Mechanical Science. Elsevier B.V. Amsterdam, NL. ISSN: 0020-7403
- International Journal of Simulation Modelling. Vienna University of Technology. Wien, Austria, ISSN: 1726-4529
- International Journal of Structural Integrity. Emerald Publishing 1757-9864
- International Journal of Vehicle Design. Inderscience, Genève, CH, ISSN: 0143-3369
- Journal of Basic and Applied Research International. International Knowledge Press, Manchester, UK. ISSN: 2395-3438.
- Journal of Chemical Engineering and Materials Science. Academic Journals
- Journal of Composite Materials. SAGE
- Journal of Elastomers & Plastics. SAGE
- Journal of Environment and Pollution. Inderscience Publishers
- Journal of Global Economics, Management and Business Research. I. Knowledge Press, Manchester, UK. ISSN: 2454-2504.
- Journal of King Saud University - Engineering Sciences. Elsevier, NL. ISSN: 1018-3647
- Journal of Marine Science and Engineering. MDPI, Basel, Switzerland. ISSN: 2077-1312
- Journal of Mechanics Engineering and Automation (JMEA). David Publishing Company. NY, USA. ISSN: 2159-5275.
- Journal of Quality in Maintenance Engineering. Emerald Group Publishing, Bingley, UK. ISSN: 1355-2511
- Journal of Scientific Research and Reports. Science Domain International. ISSN: 2320-0227
- Letters in Organic Chemistry. Betham Science. ISSN: 1875-6255
- Materials and Design. Elsevier. Amsterdam, NL. ISSN: 0264-1275
- Materials. Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland. ISSN: 1996-1944
- Metals. Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland. ISSN: 2075-4701
- Micromachines, Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland. ISSN: 2072-666X
- Open Mechanical Engineering Journal. Bentham Open. ISSN: 1874-155X
- Polymer Composites. Wiley-Blackwell. Hoboken, US. ISSN: 0272-8397
- Polymers. Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland. ISSN 2073-4360
- Proc. of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science. SAGE. ISSN: 0954-4062
- Proc. of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering. SAGE. ISSN: 0954-4100
- Proc. of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability. SAGE ISSN: 1748-006X.
- Processes. Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland. ISSN 2227-9717
- Regenerative Engineering and Translational Medicine. Springer Nature, CH, ISSN: 2364-4133
- Smart Innovation, Systems and Technologies Series. Editors: R. Howlett et al., Springer, CH. ISSN: 2190-3018.
- The Open Mechanical Engineering Journal. Bentham Open. ISSN: 1874-155X
- Thin-Walled Structures. Elsevier. ISSN: 0263-8231
- Turkish Journal Agricultural and Forestry, Tubitak, Istanbul, Turkey. ISSN: 1300-011X

## HONORS &amp; AWARDS

- 2003 May **Finalist Winner**
- *"StartCup – From Idea to Business"* regional competition by Emilia Romagna Region with the start-up proposal: "RAMSES - Reliability Availability, Maintainability & Safety for Engineering of Systems"
- 2013 April **Honorable Mention**
- *"Ingegnere Pedriali"* national competition on Research & Innovation by Forlì – Cesena Province, Italy
- 2017 September **AIAS Simulation Award**
- Award for the best simulation work represented in the video *"Numerical Study of Low Velocity Impact on BioComposites"* released by the Italian Scientific Society of Mechanical Design and Machine Construction. (07-09-2017)
- 2018 July **Technological Prize**
- *"Best Solar Vehicle Engineering Design"* at the American Solar Challenge, by Innovators Educational Foundation, US, *'with particular consideration for the skilful use of composite materials'* in reference to the solar vehicle created inside the 'Onda Solare' project. This complex design and construction intervention involved several technicians and engineers for years. For my part, in addition to dealing with general coordination, I completed various essential phases of material design, structural design, safety studies, optimization of components. I, then, followed many of the different stages of building, assembling and testing structures and parts. About 40 vehicles from various universities including MIT, Michigan, Georgia Tech, Harvard competed for this prize. (Portland, 22-07-2018)
- 2015 September **Award "Expo 2015 - Week of Protagonism of Emilia Romagna"**
- for *"the profuse commitment in Regional and European territorial cooperation in the period 2007-2013"*, by the Emilia-Romagna Region received as creator and coordinator of the transnational development intervention called 'Adria-Hub' (Milan, 20-09-2015)
- 2018 October **Special Mention**
- for the *'Research - Technological Innovation'* category within the '2018 Mobility Award' award ceremony by the Agency for Energy and Sustainable Development in relation to the 'OndaSolare' project, which I conceived and coordinated as a *'project , extremely innovative ... as a technology for sustainable mobility ... with the Mention the Jury wanted to reward the high innovative potential and the possibility that the technologies used for the realization of the prototype can also be applied in other sectors.'* (Emilia Romagna, 16-10-2018)

## PATENTS

Issued	Code	Type	Title	Exploitation
08/11/2010	2010A000026	Invention	Rapid process for creating a mould in composite material and related material	New spin-off establishment (JUNO Design srl)
09/04/2019	102019000005408	Invention	Polymeric Joint for Terrain Light Vehicles Suspensions	Use inside new solar vehicles
20/06/2020	102020000013711	Invention	Fixing Device with Safety Release Function, made by Additive Manufacturing	Rights released to the University of Bologna
07/06/2022	102022000012050	Invention	Integrated device for the dosage, mixing and fast nebulization of suspension chemical substances for the purpose of cleansing and sanitizing surfaces and environments	Request to open a start-up being defined.
21/04/2023	102023000007887	Invention	Modular System for Monitoring of Vegetated Areas and of Remote Access Detection, especially Suitable for Open Field Areas	Technology still under development
23/04/2019	DMC 006387387	Design	Solar Vehicles	Use for developing new vehicles
06/10/2023	DMC 015036377	Design	Tracker robot for carrying weights	Spin-off opening under evaluation (AUTEC srl)
12/10/2023	DMC 015036448	Design	Wearable clinical medical device for static and dynamic posturographic diagnosis	Innovative start-up establishment (CILIA srl)
21/11/2023	DMC 015041782	Design	Permanent magnet seed sorter	Spin-off opening under evaluation. (Millennium Green srl)

CERTIFICATIONS	
February 2023 –	National Scientific Qualification, Full Professor Industrial Design, Mechanical Construction and Metallurgy
February 2023 –	National Scientific Qualification, Associate Professor Aeronautical, Aerospace and Naval Engineering
April 2020 –	National Scientific Qualification, Associate Professor Industrial Design, Mechanical Construction and Metallurgy
January 2017 – May 2020	Independent Expert for Italian Ministry of Education, Universities and Research (MIUR) Area di specializzazione (5 checklist), Attrazione e Mobilità dei Ricercatori (50 checklist), Dottorati Industriali (10 in-site monitoring), Fondo dei Fondi (14 projects), Infrastrutture di Ricerca (5 checklist), Piano Stralcio - Titolo III (13 checklist) -> (> 95 CUP, 239 M€)
Sept 2018 – May 2020	Member of the MIUR-EIB 'Fund of Funds' Commission The FoF is a financing instrument created by the MIUR in collaboration with the European Investment Bank [EIB] under the National Operational Program [PON] 2014-20. It aimed to support the industries in the implementation of macro-projects that make it possible to transform R&D into product and process innovation, including the creation or development of spin-off as a specific result of the action. My role, reporting directly to the Managing Authority [MA], was to coordinate the panel of experts who collegially supervise the correct course of the line. In addition, I work in an individual way during the selection of projects, analyzing the contents, verifying the relevance to the objectives of the program and offering the last approval before the final approval, for a total contribution of about 50M€.
March 2017 –	International Expert for Foreign Institutions (> 250 projects): Kazakhstan (128 projects), Serbia (117), Poland (2), Turkey (1), Scotland (1), Montenegro (2), Ukraine (1), Azerbaijan (1), Austria (1)
September 2015 –	Independent Expert for the European Commission (> 40 projects evaluated) <ul style="list-style-type: none"> <li>- H2020: Science Connect (1), INEAS (9), InnovWide (1), M-ERA.Net (17)</li> <li>- Eureka: Eurostar (3 projects), Denmark (2)</li> <li>- COST: EU Cooperation in Science and Technology (1)</li> <li>Institute of Innovation and Technology (EIT): Raw Materials (6), Manufacturing (4),</li> <li>- SMEs Coacher for Cohesion Policy Regional and Urban Development</li> </ul>
January 2012 –	Technical Expert for National Institutions and Development Agencies (> 12 projects) Valle D'Aosta (2), Piemonte (2), Liguria (3), Veneto (1), Friuli Venezia Giulia (2), Lazio (1), Sardinia (1), Calabria (1), evaluated and/or supervised.
May 2010 –	Independent Expert for Italian Ministry of Economic Development (MiSE) (4 supervised) in the field of Technological Innovation in the following sectors: mechanical plants; wood and furniture industry machines; no-ferrous materials; composite materials; metal carpentry; foundry; metal processing; machine tools; semi-finished products; wood carpentry; motor vehicles and industrial vehicles; components for vehicles; transport. N.4 large projects (>3M€ each) evaluated and supervised.
June 2000 –	Qualifying Degree to Italian Engineers Register

## INTERNATIONAL PROJECTS

- 2023 - 2025 **Ministry of Foreign Affairs and International Cooperation**  
**'Ecological marine composites from Adriatic waste'**  
 Partnership: University of Camerino, University of Montenegro, University of Bologna, SENAI - Serviço Nacional de Aprendizagem Industrial (Brazil).  
 Role: Principal Investigator.
- 2021-2022 **Central Europe Initiative**  
**'An Evolution of the Automotive Training Centre Serbia toward the Concepts of Light and Sustainable Mobility'**  
 Partnership: Polytechnic School Kragujevac (Serbia), University of Bologna, U. of Arts of Belgrade, U. of Novi Sad and Nis, Rijeka, Ljubljana,  
 Role: Partner's Coordinator
- 2018-2016 **Erasmus Plus, EACEA, Social inclusion through education, training and youth**  
**"LIKE HOME - Assessing and recognising the prior learning of migrants. Bridging the gap and paving the road to educational and social integration"**  
 Partnership: University of Alicante; EuroTraining; EFVET; Landkreis Kassel; Folkuniversitetet; EOPEER; die Berater Unternehmensberatungs; Austrian Young Workers Movement.  
 Role: Partner's Coordinator
- 2016-2012 **EU IPA ADRIATIC CBC Programme 2007-2013**  
**"ADRIA HUB - Bridge technical differences and social suspicions contributing to transform the Adriatic area in a stable hub for a sustainable technological development"**.  
 Description: To create a network of collaboration between HEIs, companies and other institutions with the aim of strengthening the economic and social life of the Adriatic through a joint action of research, innovation and technology transfer in the field of wood manufacturing.  
 Partnership: University of Bologna, Alma Laurea, CNA Ravenna, SCM Rimini, Friuli Innovazione, MetaVeneto, UTECO Pesaro, Serbia, Bosnia & Herzegovina, Montenegro, Croatia.  
 Role: EU Project Coordinator
- 2015-2013 **FET – CSA Programme - Coordinating Action (CA)**  
**"EYE - Empowering Young Explorers"**  
 Partnership: Technical University of Delft, University of Bologna, Manchester, Belgrade, Chalmers and other partners. <https://cordis.europa.eu/project/id/619241>  
 Role: Local Coordinator & Trainer
- 2015-2012 **TEMPUS Joint European Project 516729-2011**  
**"DIAUSS - Development and Improvement of Automotive and Urban Engineering Studies in Serbia"**  
 Partnership: University of Kragujevac, Bologna, Turin, Nis, Novi Sad, Novi Pazar, Polytechnic School Kragujevac...  
 Role: Local Coordinator & Trainer
- 10/2012 - 04/2014 **Italian Ministry of Economic Development - Accordo Quadro MISE-ICE-CRUI 2010**  
**"ROBOTRAINING"**,  
 Partnership: University of Bologna, University of Arts of Belgrade, Polytechnic School Kragujevac, RIBA Composites, MetalTig, GMG, Montecatone Hospital (291.000€)  
 Description: To develop a new concept of sports equipment and rehabilitative able to accommodate combinations of movements generated by the human body, even complex ones, proposed as an innovative solution for gyms and hospitals. Joints servo, rapid prototyping of forms, virtual design and aesthetics, FEM simulation of kinematic systems, composite materials, hybrid junctions, the encoder sensing, active control devices, experimental calibration of the intensity of the efforts are only some of the disciplinary areas were the essential aspects of technological research. The new exoskeleton was involved in a programme for start-up establishment.  
 Role: Technical coordinator, support in design and development, support in BP definition.

- 01/2011 – 12/2013 **Italian Ministry of Environment**  
**“DeUrbisVento – Microeolic plants used in urban context with a double role as production and saving of energy”**  
 Partnership: University of Bologna, WIND Aeronautics, CEPA (1.211.400 €)  
 Description: Development and validation of design solutions in urban energy generation through small wind power plants with combined energy recovery functions. In particular, in order to converge more functions, it is intended to combine the production of energy with an air extraction system for the passive cooling  
 Role: Technical Coordinator, support in design and development and testing.
- 2013-2011 **EU Regional Socio-Economic Development Program 2**  
**“ATC – Automotive Training Centre in Central Serbia”**,  
 Partnership: University of Bologna, Polytechnic School Kragujevac (Serbia), ZASTAVA (Serbia), FIAT, Chamber of Commerce Kragujevac (Serbia), University of Kragujevac (Serbia)  
 Role: Coordinator
- 2013-2011 **EU Regional Socio-Economic Development Program 2**  
**“IMPuls – Innovation Management for new Products”**  
 Partnership: University of Kragujevac (Serbia), University of Bologna. Regional Chamber of Commerce Kraljevo; City of Kraljevo; Regional Centre for Small and Medium Sized Enterprise Development Kruševac. Budget: 966.624€  
 Role: Proposal Definition and Supervision during the Implementation
- 2011-2008 **Italian Ministry of Economic Development - Accordo Quadro MISE-ICE-CRUI 2008**  
**“Alma@Service - Composite Materials in Rail Transport”**,  
 Partnership: University of Bologna, University of Kragujevac (Serbia), Federal University of Niteroi (Brazil), KTH Stockholm (Sweden), CRA Cranfield (UK)  
 Role: Researcher
- 2011-2008 **FP7 – REG POT.**  
**“SeRVICE - Strengthening Railway Vehicles Centre of Faculty of Mechanical Engineering Kraljevo”**  
 Partnership: University of Kragujevac (Serbia), University of Bologna, Todor University Sofia...  
 Role: Researcher
- 2011-2008 **Eurostar 2007 – EUREKA Program**  
**“CCT – Clean Custom Tool”**  
 Partnership: Wirutex (SME - IT), University of Bologna, SUPSI, Podium (SME - CH).  
 Description: Development of a family of diamond tools with increased strength, durability, quality, and efficiency to be used in the cutting processes of lightweight composites (with plastic and aluminium matrices) or wood. The tools were optimized by the use of new materials (both for the bulk area and for the diamond plates), and for innovative manufacturing processes (eg thermal brazing instead of welding the plates), also thanks to the greater information obtained from the simulation of the cutting processes and of the functional response of the machine tool.  
 Role: Local Coordinator & Researcher
- 2011-2008 **Manunet Transnational Programme 2008**  
**“HiCut – High-speed cutting for wood products”**  
 Partnership: Cofiplast (SME - IT), MC Engineering (SME - IT), MV Engineering (SME - D), C3M (SME - SL), Eurotungstene Poudres S.A (SME - CH)  
 Description: The project aimed to design, build and put into operation a family of innovative systems with increased functionality for the cutting processes of stone materials (e.g. marble, granite) using diamond wire. Improvements have been made in the structure (e.g. to absorb and minimize vibrations) as and above all in the cutting tools (diamond wires). Specifically, the dynamics of cutting in these specific process circumstances where various phenomena are involved (e.g. wear, detachment of parts, crystalline transformation) were studied in detail and on a mesoscopic scale, perhaps for the first time worldwide, including the use of advanced numerical models. The results have led the company to create new, more efficient systems with a better impact (-15%) in terms of resources (e.g. less energy and cooling water consumed).  
 Role: Supervision, consultant

## NATIONAL PROJECTS (main)

- 2012-2014 POR-FESR Emilia-Romagna - "From Productive Districts to Technological Districts"**  
Partnership: several enterprises from the territory (8 actions, ~800.000€)  
Role: general coordination, scientific supervision, development of specific engineering solutions, training for newly hired staff, reinforcement of the industrial supply chains in relation to the issues:
1. Study of Accelerated Methods of Qualification of Components for Transmission Organs
  2. Innovative Techniques for the Production of Large Ceramic Tiles
  3. Chemical Smoothing in the development of Ceramic Products with Incremented Functionalities
  4. Metal Replacement and Manufacturing Solutions in the Wind Sector
  5. Machin Vision Solutions in Precision Mechanics in CNC Machines
  6. Ferrous Alloys and Fusori Processes with Low Environmental Impact
  7. Modern use of wood as a natural material through new CNC machining solutions
  8. Conversion Technologies and Energy Flows Management in Production Processes
- 2016-2017 POR-FESR Emilia-Romagna - Axis 1 - Research and Innovation**  
Partnership: several enterprises from the territory (8 actions, ~800.000€)  
Role: partner coordinator, development of engineering solutions
1. Project: ' IperCer - Innovation in Process for a Sustainable Ceramic Tile ' - € 1,403,043.  
Optimize and make efficient the production cycle of large slabs of porcelain stoneware by studying process and modeling solutions for the entire large format supply chain through an integrated approach that also makes use of experimental measurements in the field. The efficiency of the ceramic production cycle is to be achieved both in technological terms (improvement of compaction, cooking, measurement methods, etc.) and in energy terms (reduction of consumption) through a validation with industrial partners in the sector.
  2. Project: ' OndaSolare - a vehicle from the future: from the idea to the prototype in 24 months ' - € 979,500
- 07/2016 – 07/2017 Commissioned research**  
**Development of Solutions for Sustainable Packaging and Advanced Logistics**  
Funding: AETNA Group Spa (International Holding) Budget: € 90,000  
Role: coordination, involved in supporting: Design of the Experiment (DoE); application of variance reduction techniques (Anova); test implementation; results analysis; model development; identification of correlations between process parameters and quality of consolidation; design of new tests and test machines; setting up of the new quality certification laboratory.
- 01/2015 – 04/2016 Commissioned research**  
**Redesigned Automatic Mold Cleaning Tanks**  
Funding: KEYMICAL RS Inc (International Holding), on behalf of Pirelli Budget: € 25,000  
Activity: Study of the Corrosion Issues of Tanks for the Automatic Cleaning of Molds used in the Tire Industry by Critical Design Analysis of Implants through FMEA and Accelerated Life Tests. The study has shown that Teflon is affected by a very fast and unexpected degradation when, in conditions of temperature and acidity substantially common in traditional use, ultrasound is added. This result is non-existent in the literature and activates an interesting field of investigation in terms of design for the safety of industrial plants with ultrasound sources.  
Role: coordination, technical implementation, resource management.

## START-UP &amp; SPIN OFF (main)

2009-2011

**MATMEC Regional Laboratory for Advanced Materials and Mechanics**

The MATMEC net-lab was established as an Industrial Research & Technology Transfer hub, funded by the Emilia Romagna Region through the Regional Program of Industrial Research and Technology Transfer (PRRITT). Its primary goal was to foster the creation and enhancement of a regional interuniversity laboratory dedicated to innovative materials. Specializing in scientific and industrial research, the lab focused on metallic, ceramic, polymeric materials, and their composites, alongside the manufacturing processes required for their production. It emphasized strategies for both substitution and innovation. Formed via an ATS including the Universities of Bologna, Modena-Reggio Emilia, Parma, alongside ENEA and CNR, the lab initially supported around 30 faculty members and researchers. It later evolved into an Interdepartmental Research Center, expanding its staff to approximately 120 professionals, and has continued to operate in this capacity to the present day.

Period: 01/02/2009 - 31/07/2011 (30 months)

Partnership: several enterprises from the territory (8 actions, ~800.000€)

Role: Chief Operating Officer (COO), Chief Technology Officer (CTO), working closely with the Scientific Director, I played a pivotal role in managing the research groups and overseeing the lab's operations. My responsibilities included guiding the lab through its initial creation, subsequent expansion, and strategic structuring. A key achievement was transforming the lab into an autonomous and fully operational Legal Entity. These efforts enabled me to actively participate in, coordinate, and facilitate over 20 university-business collaboration projects. These collaborations, along with the initial funding of the laboratory, culminated in the management of approximately 8 million euros in industrial research investment.

2011-2013

**JUNO Design srl - StartUp**

Support action in reinforcing the Studio Pedrini Srl, a design centre engaging around 40 engineers and designers. Based on an extensive collaboration between the Studio Pedrini Srl and the University of Bologna on the new digital manufacturing, the *SP Design Research Center* was first born in 2007, a new division of the firm dedicated to the in-depth analysis of rapid prototyping and reverse engineering techniques. In 2012, **JUNO Design srl** was established, a real Spin-Off serving the group, the brand soon became known and recognized nationally as a symbol of quality in the Rapid Prototyping sector using industrial 3D printers for polymers and Reverse Engineering with 3D Scanners. Among the main technological assets of the spin-off, it is possible to list the patent of "Rapid process for creating a mould in composite material and related material". Among JUNO Design's prominent clients: G.D., Lamborghini, PiQuadro, Technogym, Wayey Electrobike. [<https://www.studiopedrini.it/IT/il-gruppo.xhtml>].

Role: Chief Technology Officer (CTO), also acting as academic reference, scientific supervision, development of specific engineering solutions, inventor, training for newly hired staff, support in fund raising.

10.2008-04.2010

**'RFM- Robotics Fitness Machines' – Spinner Project**

RFM is a 'SPINNER' action funded by Emilia Romagna Region & Ministry of Labor using the European Social Fund with the purpose of creating a start-up in order to produce and market an innovative range of high-tech machines for gymnastics practiced in fitness centers, with the prospect of extending it to the medical sector. Users have thus benefited from a new training system, improving motor health and athletic performance without precluding fun.

Role: My role was to support the applicants in each phase of the project, including the Business Plan definition, partners' search, founders' search, company establishment, first prototype, up to the first pre – series production.

01.2007-12.2008

**'HMMC' – Spinner Project**

HMMC is a 'SPINNER' action by Emilia Romagna Region & Ministry of Labor using the European Social Fund with the purpose of creating a start-up in order to offer direct transfer of technology from the University to the Enterprise in the field of advanced composites to industrial components. The activities of research and optimization of the fuser processes have allowed the creation of highly resistant tribological metal matrix composite materials (MCM), particularly suitable for the realization of commercial components with increased performances for numerically controlled work centers.

Role: My role was to support the applicants in each phase of the project, including the Business Plan definition, partners' search, founders' search; choice of the most suitable technical solutions for the realization of the MCM alloys; choice of prototype components / systems on which to attempt a change of material; support in the realization of prototypes and installation in the car. The company was not established missing proper financial supports to the BP.

2019-2020

**Green Laser Manufacturing srl - Start Up**

Definition, development, negotiation, and initiation of an investment plan for establishing a new research lab and hiring new staff, along with transferring to Italy the activities of KeyMical Holding Inc (based in US). The Italian spin-off, currently known as *Green Laser Manufacturing* (<https://www.glm spa.com/>) specializes in designing and constructing robotic laser cells for the automated cleaning of moulds used in tire production. Primary clients currently include industry leaders Bridgestone and Pirelli.

Role: Chief Technology Officer (CTO), responsible for the company's technology strategies, product development and sometimes research and development

2022 – till now

**Innovative Medical Devices Start-Ups**

management support to a network of innovative start-ups and SMEs in medical devices and clinical care sector, driving business enhancement through strategic management interventions and robust fund-raising efforts. My role involved offering expert guidance in both governance and operational efficiency, significantly contributing to their development and success in securing essential financial resources:

1. Ardesia Technologies Srl, Bologna (<https://www.ardesiatechnologies.com/>)
2. OTECH Industry Srl, Alessandria / Bologna (<https://www.otechindustry.it/>)
3. CLIA Srl, Bologna (website under construction)
4. INSIMILI (<https://www.insimili.com/>), collaboration just starting.

Role: Chief Operating Officer (COO), overseeing the day-to-day operations of the company and often works closely with the CEO.

## BIBLIOMETRICS

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Scopus Preview

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Subject area:

[Engineering](#) [Materials Science](#) [Physics and Astronomy](#) [Decision Sciences](#) [Computer Science](#) [Chemical Engineering](#)  
[Environmental Science](#) [Agricultural and Biological Sciences](#) [Chemistry](#) [Social Sciences](#) [Mathematics](#) [Neuroscience](#) [Energy](#)  
[Immunology and Microbiology](#) [Business, Management and Accounting](#) [Biochemistry, Genetics and Molecular Biology](#)

Documents by author

150

Total citations

2,174 Citations 1,278 documents

 h-index: 

26

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