

## PROF. CATERINA RIZZI

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**Laurea Degree in Physics** received from the University of Milan in 1985.

**Since 1 Nov 2001 Full Professor** of Technical Drawing and Product Life-cycle Management for Mechanical and Management Engineering at Faculty of Engineering, **University of Bergamo**.

From Nov 1995 to Oct 2001 **Associate Professor** of Computer Aided Design, Mechanical Engineering, Faculty of Engineering, **University of Parma**.

From Nov 1992 to Oct. 1995 **Associate Professor** of Technical Drawing, Chemical Engineering, Faculty of Engineering, **University Federico II of Naples**.

### UNIVERSITY SERVICES

- From September 2014, **Head of the Department of Management, Information and Production Engineering**.
- From October 2015, **Member of the Academic Senate** of the University of Bergamo.
- From 2012 to August 2014, **Deputy Head of the Engineering Department**, University of Bergamo.
- From November 2005 to 2010 **Research Delegate at University of Bergamo**.
- From May 2006 to October 2015 **Chair of Patent and Technology Transfer Board** at University of Bergamo.
- From September 2016 of **Member of Technology Transfer Board** at University of Bergamo.
- From 2008 to 2012 **Director of the COGES** (Centre for Innovation and Knowledge Management) Centre, University of Bergamo.
- **Representative** for Engineering Faculty, University of Bergamo of Lifelong Learning Programme-LLP from Academic Year 2002-2003 to 20013-2014.
- **Faculty Member of PhD programme in Economics and Management of Technology** (DREAMT) jointly founded in 2013 by University of Pavia and University of Bergamo (<http://phdemd.unipv.eu/site/home.html>).
- **She was Member of Board of Supervisors, PhD programme Doctoral School in Industrial Engineering** - Chemical, Materials and Manufacturing Engineering (<http://www.sdii.dimeg.unipd.it/>) coordinated by University of Padua.
- **Member** of various national and international **Boards of Examiner of PhD students**.

### EXTERNAL SERVICES

- **Founder** and from 2007 to 2010 **President APEIRON ASSOCIATION** ([www.apeiron-triz.org](http://www.apeiron-triz.org)), the Italian Association for Reason-based Innovation, born in September 2003 from an initiative of a group of people from industry and academy, sharing an interest toward systematic innovation methodologies, such as TRIZ.
- **Reviewer for the European Commission** within the framework of V, VI and VII Framework Programme and Horizon 2020 programme.
- **Reviewer** of research proposals for **Ministry of Education, Youth and Sports** – EU Operational Programme Management Section, **Czech Republic**.
- **Reviewer** of research proposal for **University of Padua and Regione Piemonte**.
- From September 2012, **Founder and co-owner of BiGFLO spin-off** (<http://www.bigflo.it>) whose aim is to develop software solutions to support companies during product and process innovation.
- **Scientific Committee Member** of various Conferences (e.g., VRCAI, CAD&A, TMCE, and ICIDM), **Reviewer of international journal and conference papers** (e.g., JRRD, CAD, Computer in Industry

Journals, ASME Conferences), and **Program Chair** of international Conferences (e.g., Siggraph VRCAI 2013 and ICIDM 2014).

- Member of **Editorial Boards** (e.g. CAD&A Journal-Francis & Taylor, Journal of Computational Design and Engineering (JCDE)).
- She was **Organiser of the 10th ETRIA World TRIZ Future Conference 2010**, 3-5 November 2010 and Co-Organizer of **CAD 13 Conference**, 17-20 June 2013 both held in Bergamo.

## RESEARCH ACTIVITIES

At present, she **coordinates the V&K-Virtualisation & Knowledge** ([www.unibg.it/vk](http://www.unibg.it/vk)) research Group composed by 8 people (2 researchers, 2 PhD students and 4 research assistants). Research activities are carried out within the framework of European, national (e.g., 6th and 7FP EU programmes, Industria 2015) and projects and research contracts with private institutions and industrial companies.

**Scientific competences** concern methodologies and ICT tools to support the product development process: from CAx to PDM systems and to systems for knowledge management and systematic innovation (e.g., TRIZ) in different industrial contexts.

In particular, **since 1985**, she carried out **research activities** in the **following research areas**: Solid and surface modelling, Graphical user interface and related development tools, 3D CAD systems for automotive industry, Virtual prototyping and Virtual/Augmented Reality, Knowledge Based Systems, Physics-based modelling and simulation of non rigid products; Virtual Ergonomics and Digital human modelling, Additive manufacturing, Eco-design, Systematic innovation; Intellectual Property Management; PDM/PLM systems to manage the product life-cycle applied in different industrial sectors, from Mechanics and Automotive to Textile-Clothing and Bio-engineering.

She participated to several European projects funded by UE and National research projects also as project co-ordinator.

Results have been reported in more than **200 scientific publications**, mainly published in journals or proceedings of international conferences.

## TEN RELEVANT PUBLICATIONS

- [1] Comotti C., Regazzoni D., Rizzi C., Vitali A. (2016) Additive manufacturing to advance functional design: an application in the medical field. *Journal of Computing and Information Science In Engineering*, p. 1-45.
- [2] Colombo G., Facoetti G., Rizzi C., Vitali A. (2015) Simplynurbs: a software library to model nurbs for medical applications. *Computer-Aided Design And Applications*, 12, p. 794-802.
- [3] Regazzoni, D., Rizzi, C., (2015) Depth sensors along the design and validation of lower limb prosthesis, *Journal of Integrated Design and Process Science*, 19 (1), pp. 71-80.
- [4] Regazzoni D., De Vecchi G., Rizzi C. (2014) RGB cams vs RGB-D sensors: low cost motion capture technologies performances and limitations. *Journal Of Manufacturing Systems*, vol. 33, p. 719-728.
- [5] Russo, D., Rizzi, C. (2014) Structural optimization strategies to design green products, *Computers in Industry*, 65 (3), pp. 470-479.
- [6] Colombo, G., Facoetti, G., Rizzi, C. (2013) A digital patient for computer-aided prosthesis design, *Interface Focus*, 3 (2).
- [7] Regazzoni D., Rizzi C., Nani R. (2011) A TRIZ-based approach to manage innovation and intellectual property. *International Journal of Technology Management*, 55, p. 274-285.
- [8] Colombo G, Filippi S, Rizzi C., Rotini F. (2010) A new design paradigm for the development of custom-fit soft sockets for lower limb prostheses, *Computer in Industry*, 61(6), pp. 513-523.
- [9] M. Bertoni, M. Bordegoni, U. Cugini, D. Regazzoni, and C. Rizzi, (2009) PLM paradigm: How to lead BPR within the Product Development field, *Computers in Industry* 60, pp. 476-484.
- [10] Fontana M., Rizzi C., Cugini U., (2005) 3D Virtual Apparel Design for Industrial Applications, *Computer Aided Design*, Ed. Elsevier, 37, pp. 609-622.