Procedia MANUFACTURING

27th International Conference on Flexible Automation and Intelligent Manufacturing, FAIM2017, 27-30 June 2017, Modena, Italy

Preface

Marcello Pellicciari[a], Margherita Peruzzini[a],*

[a] Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Modena, Italy

This edition contains the collection of scientific and industrial research presented in the 27th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2017). The International Conference in Flexible Automation and Intelligent Manufacturing (FAIM) is the leading international forum for dissemination of current research on all aspects of automation and manufacturing, and highlights how theoretical models and principles underpin practice in a production environment. The conference traditionally links researchers and practitioners both from industry and academia specializing in automation, manufacturing, and other related engineering disciplines from around the world. The 1st FAIM conference took place in Ireland at the University in Limerick in 1991. Since 1991, FAIM has been hosted in many prestigious Universities on both sides of the Atlantic Ocean, between the Unites States and Europe, and recently it moved also to Asia. This edition took place for the first time in Italy, in Modena. Modena is located into the Emilia region, which is famous for Advanced Manufacturing, Automotive and Food industries, with a lot of successful advanced automation cases in different fields: from packaging machines, to robotics, gearboxes, fluid power, ceramics tiles, pharmaceutics. In particular, Modena is the beating heart of the so-called "Motor Valley", which includes companies like Ferrari, Lamborghini, Maserati, CHN Industrial, Ducati, and Pagani.

FAIM2017 focused on "Intelligent Manufacturing and Engineering Methods for Industry 4.0". It was hosted by the University of Modena and Reggio Emilia from 27th to 30th June, 2017. The conference linked researchers and practitioners from industry and academia specializing in industrial robotics, original advanced manufacturing and related engineering disciplines, from 55 different countries. 387 papers were submitted. Papers were peer reviewed by a panel of 70 international experts in manufacturing and automation and the best quality papers accepted for presentation during the conference and publication in the proceedings. FAIM2017 was supported by EFFRA, the European Factories of the Future Research Association, which promotes the development of new and innovative production technologies among its industrial partners. During the conference, best papers were awarded related to four categories: Best paper, Best Student paper (presented and authored by one or more PhD students), Best

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* Corresponding author. Tel.: +39.059.2056259; fax: +39.059.2056129
  E-mail address: margherita.peruzzini@unimore.it

Industrial paper (presented and authored by researchers employed in industry), and Best paper in "Women in Manufacturing Engineering" (presented and authored by women bringing high-quality results in the context of manufacturing engineering).

The Proceedings of FAIM2017 was published in Elsevier's Procedia Manufacturing, an open access venue for manufacturing conference proceedings. The publication in Procedia Manufacturing has broadened the availability of FAIM2017 papers and helped the dissemination of our manufacturing research findings. Top FAIM2017 papers are also selected by editors of foremost international journals such as Advanced Engineering Informatics (ADVEI) and Robotics and Computer-Integrated Manufacturing (RCIM), also published by Elsevier, and other international journals dealing with advanced manufacturing.

Paper publication on Procedia Manufacturing is organized in 16 tracks:
1. Collaborative Robotics in Smart Manufacturing
2. Robotics and Computer Integrated Manufacturing
3. Robots in Added Value Manufacturing
4. Advanced Manufacturing technology
5. Adaptive and Sustainable manufacturing
6. Smart Factories
7. Lean and Agile Manufacturing
8. Reliability and Predictive Maintenance
9. Quality and Risk Management
10. Human Factors in manufacturing
11. Engineering Collaboration for Smart Manufacturing
12. Digital Product and Process Development
13. Production Planning and Scheduling
14. Manufacturing Operations, Supply Chain and Logistics
15. Data science in manufacturing
16. Poster Session

In closing, we acknowledge the advice from the professional support of the FAIM Committee. We also recognize the support of Dr. Gaia Lupo of Elsevier and her team. Finally, we are excited about the future of FAIM and our research community.

15th June, 2017

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