



30th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2021)  
15-18 June 2021, Athens, Greece.

## Editorial

George-C. Vosniakos<sup>a,\*</sup>, Marcello Pellicciari<sup>b</sup>, Panorios Benardos<sup>a</sup>, Angelos Markopoulos<sup>a</sup>

<sup>a</sup>National Technical University of Athens, School of Mechanical Engineering, Heron Polytechniou 9, 15780 Athens, Greece

<sup>b</sup>University of Modena and Reggio Emilia, INTERMECH interdepartmental center, Via Giovanni Amendola 2, 42122 Reggio Emilia, Italy

\* Corresponding author. Tel.: +30 210 772 1457; fax: +30 210 772 4273. E-mail address: [vosniak@central.ntua.gr](mailto:vosniak@central.ntua.gr)

© 2020 The Authors. Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Peer-review under responsibility of the scientific committee of the FAIM 2021.

FAIM conference series was founded by Professors Bill Sullivan of the Virginia Polytechnic Institute, USA and Munir Ahmad of the University of Limerick, Ireland in 1991. Since then, FAIM Conference has run as a yearly event in 26 cities of 14 European, American and Asian countries. It has the right size, i.e. neither huge to become impersonal nor small to become uninteresting. It is known for its excellent, non-antagonistic and encouraging atmosphere.

The 30th Flexible Automation and Intelligent Manufacturing Conference is the milestone of 30 years of continuous presence in the International Manufacturing scene addressing both technology and management aspects. It also signifies a landmark in the Conference's steering, organisational and scientific standards.

The theme of 30<sup>th</sup> FAIM is 'Multiple, complementary and evolving facets of modern manufacturing: holistic synthesis' pointing to its four thematic pillars underpinned by automation and intelligence streams, namely: Manufacturing processes, Machine tools and manufacturing equipment, Manufacturing systems, Enabling technologies. Indeed, Manufacturing is probably the most inter-disciplinary domain in engineering and this is becoming more and more conspicuous with the advent of modern manufacturing paradigms the most prominent of which is Industry 4.0.

30<sup>th</sup> FAIM Conference was originally scheduled to take place in Athens, Greece in June 2020. However, due to the CoVid-19 pandemic and in view of FAIM's intensely interactive and sociable nature, the Organizing Committee and Advisory Board jointly decided to postpone the Conference to 15-18 June 2021, at the same venue. It is still the 30<sup>th</sup> FAIM but its acronym is henceforth FAIM2021. However, the

publications program remained unaltered, the only difference to previous FAIM conferences being that the papers will appear in print before their actual presentation at the Conference.

FAIM2021 host is the National Technical University of Athens, Greece's oldest and most prestigious Technical University. School of Mechanical Engineering is a centre of excellence in education and research concerning Manufacturing, amongst other topics, NTUA's engineering graduates staff a vast array of Universities all over the world, including many prestigious ones.

FAIM2021 is run by a compact Organizing Committee consisting of 8 members, which is aided by the Advisory Board consisting of 15 members being former Chairs of previous FAIM Conferences or Editors-in-Chief of important scientific journals. Paper reviewing was performed rigorously by the 46-strong Scientific Committee, being the right mix of many well-established internationally recognised and fewer younger dynamic and fast rising academics. This was aided by an international board of reviewers carefully selected according to their research expertise.

FAIM2021 attracted a record number of interesting papers, judging by the standards of the FAIM series so far, of which 294 papers were accepted for presentation: 252 papers are included in this volume of Procedia Manufacturing journal, whilst 42 papers were fast-tracked to 'Journal of Manufacturing Systems', 'Robotics and CIM' and 'International Journal of Advanced Manufacturing Technology' following special arrangements between these journals and FAIM that were put in place for the first time in 2017.

2351-9789 © 2020 The Authors. Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Peer-review under responsibility of the scientific committee of the FAIM 2021.

10.1016/j.promfg.2020.10.001

The papers of this volume are ordered starting with process/technical focus and gradually proceeding to systems/management focus. In particular, the following 11 topics or tracks are covered in order of appearance:

- i. Industrial Robotics
- ii. Monitoring and inspection
- iii. Flexible automation
- iv. Additive Manufacturing
- v. Manufacturing Processes
- vi. Product design, data modelling and process planning
- vii. Industry 4.0
- viii. Manufacturing systems design
- ix. Planning and scheduling
- x. Logistics
- xi. Sustainability, education and training.

Most of these topics are dealt with by use of modern enabling technologies such as Artificial Intelligence, Machine Learning, Virtual Reality etc. Thus, such technologies have not been considered as separate topics in their own right.

The Chairs of FAIM2021, on behalf of the Organizing Committee and Advisory Board, would like to extend sincere thanks to a number of people who made FAIM2021 publications programme a success.

First, all authors are cordially thanked for entrusting their research output to FAIM Conference. The Scientific Committee and reviewers have performed exemplary evaluation of a very high number of submitted manuscripts.

Prof. Frank Chen, FAIM Honorary Chair, contributed hugely to many high level organizational matters encouraging and supporting difficult decisions in a timely and wise manner.

Support and flexibility of Elsevier and Timo Bazuin, in particular, in relation to *Procedia Manufacturing* matters has been most reassuring in this critical situation in the face of unprecedented planning and scheduling uncertainty.

Collaboration with Prof. Lihui Wang and Prof. Andrew Yeh-Ching Nee, Editors-in-Chief of the fast-tracking journals associated with FAIM has been excellent throughout.

Following such a successful publications program, we are very much looking forward to equally successful paper presentations in Athens, in June 2021.

George-Christopher Vosniakos  
*FAIM2021 General Chair*  
*Professor, National Technical University of Athens, Greece.*

Marcello Pellicciari  
*Industrial relations Chair*  
*Professor, University of Modena and Reggio Emilia, Italy.*

Panorios Benardos  
*FAIM2021 Program Chair*  
*Assistant Professor, National Technical University of Athens, Greece.*

Angelos Markopoulos  
*FAIM2021 Media Chair*  
*Assistant Professor, National Technical University of Athens, Greece.*