Advances in Production Management Systems. Towards Smart and Digital Manufacturing Part II
David Romero, Lalic Bojan, Majstorovic Vidosav, Marjanovic Ugljesa,
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IFIP was founded in 1960 under the auspices of UNESCO, following the first World Computer Congress held in Paris the previous year. A federation for societies working in information processing, IFIP’s aim is two-fold: to support information processing in the countries of its members and to encourage technology transfer to developing nations. As its mission statement clearly states:

*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP’s events range from large international open conferences to working conferences and local seminars.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

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More information about this series at http://www.springer.com/series/6102
We live in a time where just one factor (i.e., COVID-19) could change the game plan for the global manufacturing economy. Digital transformation has been going on in the last decade, and it seems that not all the countries and companies are utilizing all the opportunities that it could provide to build new digital capabilities such as ‘digital resilience.’ A digital transformation path towards Industry 4.0 in manufacturing is more important than ever. Yet, how to approach the development and scaling of digital technology is a question that keeps executives awake at night and academics in a constant quest. The current digital transformation of manufacturing has so far mostly been studied from the perspective of the cyber-physical production system as drivers of change. However, there are several other enablers, including artificial intelligence; additive and hybrid manufacturing; 5G-enabled manufacturing; digital assistance systems based on augmented, virtual, and mixed reality; industrial, collaborative, mobile, and software robots; advanced simulations; cloud and edge technologies; and data-driven product-service systems. These are the key components of a digital transformation and the main research thrusts in the production management systems research community. Thus, the question of how to find the path to the digital transformation and innovation of production management systems is of eminent importance.

The International Conference on Advances in Production Management Systems (APMS 2020) in Novi Sad, Serbia, brought together leading international experts from academia, industry, and government in the area of digital transformation and innovation to discuss globally pressing issues in smart manufacturing, operations management, and supply chain management in the Industry 4.0 era. Under influence of COVID-19, the event was also digitally transformed: For the first time in its history the APMS conference was organized in a ‘hybrid mode,’ meaning face-to-face as well as online conference sessions. A large international panel of experts reviewed all the papers and selected the best ones to be included in these international conference proceedings. The topics of interest in APMS 2020 included Digital Supply Networks, Data-Driven Production Management, Sustainable Production Management, Cloud and Collaborative Technologies, Smart Manufacturing and Industry 4.0, Data-Driven Services, Digital Lean Manufacturing, and Digital Transformation Approaches in Production Management.

The proceedings are organized into two parts:

- The Path to Digital Transformation and Innovation of Production Management Systems (Volume 1)
- Towards Smart and Digital Manufacturing (Volume 2)

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August 2020

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