CALL FOR PAPERS
SPECIAL SESSION ON

Disruptive technologies for disruptive manufacturing

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Session description:

During the last decade and thanks to the emergence of the industry 4.0 paradigm, companies have been able to take advantage of the disruptive technologies deployment offered by the 4th industrial revolution and therefore excel in productivity and economic performance. This observation is evident through the integration of data, information, and knowledge technologies, which are integrated with physical technologies allowing to generate more efficient, transparent and smarter manufacturing processes and deal with any uncertainties and hazards arising from the external environment. On the other hand, the current global context characterized by pandemic, climatic and geopolitical issues, now forces industrial and manufacturing activities to go beyond technical and economic objectives by putting forward other objectives that are also essential for the manufacturing sector, such as worker well-being, sustainability and resilience. These last objectives represent the fundamental pillars of the 5th industrial revolution, in other words industry 5.0. Therefore, this special issue aims to answer a key question which is how the application of disruptive technologies will shape the future of manufacturing and how these technologies can contribute to the emergence of a new generation of disruptive manufacturing that meets the objectives of industry 5.0.

Following this purpose, below are the potential topics for this special issue but not limited to:

- Disruptive Technologies for Sustainable Supply Chain Management,
- Integrated Production and Maintenance planning in Cyber-Physical Production Systems,
- Smart Maintenance Technologies,
- Manufacturing-as-a-Service,
- Intelligent Warehouse Management Systems,
- Industrial Mobility and Autonomous Vehicles,
- Decision Support for Smart Manufacturing Systems,
- Smart Manufacturing Scheduling,
- Human-Machine Interaction for Cobotics,
- Digital Twins in Manufacturing,
- Additive and Hybrid Manufacturing,
- Smart Material Flow for Manufacturing,
- Smart Product Lifecycle Management,
- Agility and Risk management,
- Workforce Transformation for Digital Business Agility,
- etc.

Zakaria Chekoubi

PhD., doctor's degree obtained at Lorraine University (France), holder of MSc option Industrial Systems Engineering from the same university and MSc option Electrical Engineering from the Polytechnic School of Agadir (Morocco); Research Coordinator at the International University of Agadir – Universiapolis (Morocco) and lecturer of Electronics and Automatic Control Systems with over 6 years of experience, including teaching and research, author and co-author of several scientific publications in the logistics field.

Lahcen MIFDAL

PhD, doctor's degree obtained at University of Lorraine (France), he holds 2 MSc degrees in the domain in the research and concept of industrialization and innovation as well as in industrial systems engineering, certified AFAV and APICS for Basics of Supply Chain Management; lecturer at International University of Agadir - Universiapolis since 2012, nominated responsible of Industrial Engineering Department in 2013 and Quality Manager in 2015; author of publications in scientific journals and supervisor of numerous master thesis.

Sofiene DELLAGI

He started his research activities in 2002/2003, when he did a technical project in order to validate his research Master of applied mathematics. In this project which he practiced in mathematic laboratory of university of Metz, he studied the stabilization of the partial derived equations in order to develop a new analytical optimization strategy. Between 2003 and 2006, he started research activities under the direction of M. Nidhal Rezg in a PH.D study. His PH.D studies led to the development and the optimization of new maintenance and production strategies for a manufacturing system calling up-on a subcontractor. Currently, he is extending his research studies to treat the case of several subcontractors. In fact, he has always continued to develop new maintenance/production policies while optimizing new strategies based on the selection and/or switching between several subcontractors. His PHD allowed him to obtain the department General Council price (France). The principal results obtained in his PHD study are presented in a paper published in international journal (Dellagi S.ET AL IJPR 2007). After he obtained his PHD, his research studies have dealt with the frame of reliability maintenance and production. His research works,

in last 10 years, have been characterized by the development and the optimization of new strategies taking into account several operational and environmental constraints. The principal research studies in the last 10 years have been obtained with collaboration of international collaboration and the supervisory of 6 PHD students and 10 research master ones. The fruit of these works is represented by the producing of one book, one book chapter and 14 papers published in international journals (cited in ISI Web of science). All these studies and interested prospects are summarized in his HDR dissertation presented in December 2013. Since 2015 he has been named Responsible for MPM “Management of maintenance and production “ team in LGIPM laboratory.

Zied HAJEJ

He is an Associate professor (HDR) at the University of Lorraine, Metz platform since September 2012. It operates research and responsible for the DMIS (Decision Making of Iffy Systems) team in the laboratory LGIPM Metz and responsible of master for industrial engineering system (ISC-GSI) delocalized in Wroclaw-Poland. After obtaining his doctorate at the University of Paul Verlaine - Metz in 2010, he was employed at the University of Metz as research engineer until August 2012. His main areas of research on the optimization of maintenance policies coupled to production and the development of methods and support the design and control tools in the production systems of goods and services. He is the author of numerous articles in international community of industrial engineering. Her teaching areas include Reliability/Maintenance, modeling and organization of manufacturing and logistics systems, the practice of simulation, automation, and quality system production