

Special session**Deadline: 15 May 2020****Title:***Artificial Intelligence & Data Analytics in Manufacturing 4.0***Organised by (names, affiliations and emails)**

Samia CHEHBI-GAMOURA, Ph.D. (samia.gamoura@em-strasbourg.eu), Associate Professor, Humanis, EM Strasbourg, Strasbourg University, Strasbourg, France.

Samuel FOSSO WAMBA, Ph.D., HDR (s.fosso-wamba@tbs-education.fr), Full Professor, Information, Operations and Management Sciences, Toulouse Business School, Toulouse, France.

Maciel QUEIROZ, Ph.D. (maciel.queiroz@docente.unip.br), Professor, Postgraduate Program in Business Administration, Paulista University – UNIP, São Paulo, Brazil.

Abstract:

Artificial intelligence (AI) is reshaping the organizations and society because of its pervasiveness capacity. AI refers to machines (robots, computers, etc.) making tasks that typically demand specific human intelligence. Moreover, AI with its sub-field 'Machine Learning' (ML) is the core of the new era of Data-oriented Manufacturing 4.0 of nowadays. For industrials, these two paradigms are becoming an absolute critical key to success to remain competitive. AI approaches are the most enabler techniques of the 'intelligent' industry through process automation, industrial robotics, predictive decision-aid, Big Data cyber-integration, cyber-physical systems, IoT connectivity, and so forth. In AI-powered manufacturing, the traditional theory-oriented management is being replaced by Data-oriented management where Data is taking the central in guiding processes 'intelligently' instead of old best practices. Therefore, mutations are already in their way of affecting completely the industrial worldwide networks by eliminating inefficiencies, assisting workers, and creating new opportunities, but also in engendering unexpected challenges by altering the current operations. The objective of this special session is to call academics to debate and examine the way AI approaches are influencing the industrial processes under the new era of Manufacturing 4.0.

List of topics:

Suitable topics include -but are not limited to- the following:

- Artificial Intelligence, Machine Learning and Deep Learning in manufacturing,
- Data-driven and Big Data-driven manufacturing,
- Proactive and predictive management in manufacturing,
- Cyber-Physical System, Industrial Internet of Things (IIoT),
- Web analytics, Big Data Analytics and Data Analytics in manufacturing,
- Industry 4.0, Smart factory, 3D and additive manufacturing, Industrial robotics,
- Blockchain and Cloud-based manufacturing,

- *Big Data Analytics and Data Analytics in Business Process Management (BPM),*
- *Big Data Analytics and Data Analytics in Product Lifecycle Management (PLM),*
- *Big Data Analytics and Data Analytics in Supply Chain Management (PLM),*
- *Business intelligence (BI), Data Mining (DM) in manufacturing 4.0,*
- *E-Collaborative operational management,*
- *Artificial Intelligence barriers and enablers in Manufacturing 4.0,*
- *Critical Success Factors of Artificial Intelligence in Manufacturing 4.0,*
- *Operational, tactical, and strategic workers skills required to operate with Artificial Intelligence in Manufacturing 4.0?*

Note: Particular attention and priority in the reviewing process will be given to the papers related to the pandemic COVID-19.

Keywords:

Manufacturing 4.0, Cyber-physical systems, Artificial Intelligence (AI), Big Data, Advances Analytics, Blockchain,