

## Intelligent / Smart Manufacturing

### Special Session

### Intelligent / Smart Manufacturing

#### Call for Papers

As manufacturing engineering in the 21st century becomes more challenging as it goes through the transition from mass production to mass customisation and from conventional methods to digital manufacturing platforms the industry is in need of smart solutions as never before. The customer demands, market variations and environmental issues pose multiple constraints on the manufacturing systems, processes, and operations which require tools and techniques that are capable of learning, modelling and forecasting in order to deliver the required outputs in the most efficient manner. The answer lies in Intelligent Manufacturing Systems that have the capability to learn, reconfigure, forecast and make decisions by interconnecting different processes, machines, resources and systems to capture data and apply machine learning tools and techniques to extract knowledge in order to perform, control and optimise various tasks in an efficient, smart and sustainable manner.

Potential topics include, but are not limited to:

- Manufacturing System Design
- Manufacturing Process Planning
- Manufacturing Process Modelling
- Manufacturing Process Control
- Manufacturing Operational Decision
- Job Shop Scheduling
- Condition Monitoring and Diagnosis
- Quality Assurance
- Total Preventive Maintenance
- Robotics

- Collaborative Robots
- Product Life-Cycle and Management
- Decision Support
- Optimisation
- Industry 4.0/5.0
- Cyber Physical Systems
- Remanufacturing
- Reconfigurable Factory
- Sustainable Manufacturing
- Human-centric Manufacturing
- Resilient Manufacturing
- Applications in manufacturing:
  - AI/ML
  - Deep Learning
  - Big Data Analytics
  - Internet of Things / Industrial IoTs
  - VR/AR/MR
  - Robotic Process Automation

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#### Time Schedule:

Paper due date	20 May 2021
Acceptance	30 May 2021
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