

Special Session proposal for MIM 2022 conference

1. Session Title: **Reconfigurable, Flexible or Agile Production Systems to deal with a VUCA World**

2. Session Objectives and Scope:

To remain competitive in a Volatile, Uncertain, Complex and Ambiguous (VUCA) World, companies have to adapt their production systems. Reconfigurable Manufacturing Systems (RMS) have been introduced for this purpose, with machine components, machines software's or material handling units which can be added, removed, modified or interchanged as needed and when imposed by the necessity to react and respond rapidly and cost-effectively to changing requirements. They are still relatively scarce in the industry, and their integration to improve resilience all along the supply chain remains challenging, however digitalization is an important lever to support this evolution. In addition to dealing with uncertainty, the agility of these systems could also provide innovative ways to deal with new societal challenges such as sustainability (e.g. energy or life-cycle management) and allow evolving toward new business models (e.g. servitization).

This special session will provide a forum to investigate, exchange novel ideas and disseminate knowledge covering the broad area of RMS applications in nowadays industry. Experts and professionals from academia, industry, and the public sector are invited to submit papers on their recent research and professional experiences on the subject. High quality works reporting on relevant reviews of existing literature, theoretical studies, case studies, inter-disciplinary research are all very welcome.

Topics may include, but are not limited to:

- Resilience of Manufacturing Systems or Networks,
- Innovative ways to improve the Sustainability of Manufacturing Systems,
- Lifecycle management of Manufacturing Systems,
- Reconfigurable Manufacturing Systems (RMS),
- X-Network or Intertwined Supply Network,
- Factory Production Network,
- Cloud Manufacturing or Manufacturing as a Service (MaaS),
- Impact of Industry 4.0 on Reconfigurability or Agility

3. Organizers:

Prof. Lyes Benyoucef, Aix-Marseille University, Marseille, France, lyes.benyoucef@lis-lab.fr

Prof. Xavier Delorme, Mines Saint-Etienne, Saint-Etienne, France, delorme@emse.fr

Dr. Ing. Susanne Vernim, Technical University of Munich, Munich, Germany, susanne.vernim@iwb.tum.de