

Reconfigurable production system for dynamic manufacturing environment

At present, demand generated from market is volatile and more customized. As witnessed, due to sudden change in market demand during the global pandemic, prices of some products increased within in very short period of time i.e., face masks, ventilators, surgical masks, hand gloves and sanitizers. This shows the importance of role of many manufacturing industries to adopt and respond these market changes within short period of time using the flexible and reconfigurable manufacturing systems. At present, industries are also adopting Industry 4.0 digital technologies to sustain their market position as well as create sustainable value creation through Industry 4.0 business models. Industry 4.0 also brings many technical solutions for agile based production system in terms of information system as well as machines. However, there are many challenges in terms of configuration selection, optimization of these manufacturing systems and some are related to design stage. Also, the literature related to these technologies in Industry 4.0 context is still limited. Therefore, this special session aims to gather the latest contribution related to optimization of flexible or reconfigurable manufacturing systems in Industry 4.0 context. The topics are but not limited to:

1. Reconfigurable manufacturing system design
2. Configuration selection problems related to reconfigurability
3. How sustainability can be achieved through reconfigurable manufacturing systems?
4. Supply chain reconfigurability in Industry 4.0
5. Role of meta heuristic approaches in the optimization of reconfigurable manufacturing systems
6. Management for flexible and reconfigurable manufacturing system for sustainable future

Organizer:

Dr. Rajeev Agrawal

Associate Professor, Department of Mechanical Engineering

Malaviya National Institute of Technology Jaipur (India)-302017

ragrawal.mech@mnit.ac.in