

Special Session **SS_07**

Ubiquitous digitization from manufacturing organization perspective

Brief description of the specific scientific scope of the Special Session:

Digitalisation is present more and more in modern world. It supports manufacturing processes planning, realization, monitoring and reporting as well as support decision making process. Many advantages that digitalisation bring can be identified. In the same time many challenges for companies appear. Digitalisation influences on various aspects concerning manufacturing areas and company operations. It is interesting to research how digitalisation influence sustainability of manufacturing companies. Digitalisation can influence economic aspects. To develop and implement new solutions the companies must invest in technologies that will bring financial benefits. New technologies can influence social aspects by creating new work positions or by eliminating old professions. They might also support workers in performing their job or they might require new or improved knowledge and skills. Moreover, new solutions might influence positively environmental aspects what can be noticed by companies and what might additionally influence positively on financial aspects, by decreasing for example costs of energy use.

The Special Session addresses the many issues connected with digitalisation that might support manufacturing companies, manufacturing lines or even single workstations and employee.

The aim of the Special Session is to provide an international forum for the dissemination and exchange of scientific information on design and application of modern technologies that can be applied to support sustainable development with identification of benefits which these technologies can bring in all areas of sustainability: economic, social and environmental.

List of topics of interest

1. Simulations and virtual reality
2. Cyber Physical Systems
3. Vertical and horizontal system integration
4. Computer aided systems
5. Autonomous robots
6. Human-robot collaboration
7. Real time decision making
8. Big data analytics
9. Internet of Things
10. Skills in industry

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