



Proposed Special Session

Energy Efficient Manufacturing

Session Chairs:

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Session Objectives:

The issue of fostering energy-efficient manufacturing gains more and more importance due to global mega trends like global warming, climate change and scarcity of resources. Furthermore industrial drivers constituted by rising and volatile energy prices, ever-stricter becoming legislations and increased customer awareness rise the attention to the research field. Holistic approaches to design and operate modern green production systems are required to cope with those challenges adequately. In this regard, ICT plays a major role as an enabler for energy-efficient manufacturing by relevant software, hardware and System of Systems. Approaches for modeling and assessing energy efficiency in manufacturing contribute in conjunction with energy-related KPIs to the management and design of future production systems. The aim of this session is to share concepts and ideas of promising methods and tools by industrial and academic stakeholders to improve production systems in terms of energy efficiency.

Topics:

- Approaches for modeling and assessing energy efficiency in manufacturing
- ICT-based systems and tools for energy management
- Methods and tools to integrate energy efficiency measures in manufacturing decisions
- Design of energy and resource efficient factories and processes
- Energy-related performance indicators for production planning and control
- Holistic approaches and models to design and operate green production systems
- Production management systems to foster energy efficiency in manufacturing

Organizers of the Special Session:

The session is organized by the Management, Economics and Industrial Engineering Department of Politecnico di Milano.