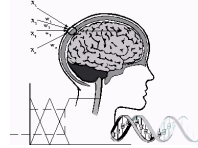




International

Innovation in Knowledge Based and Intelligent
Engineering Systems



INVITED SESSION SUMMARY

Title of Session:

Resource and Energy Efficiency for Sustainability Advances in Process Industries

Name, Title and Affiliation of Chair:

Chair: Prof Steve Evans, University of Cambridge

Co-Chair: Dr Maria Holgado, University of Cambridge

Details of Session (including aim and scope):

This invited session is guided within the activities of the project MAESTRI (<http://maestri-spire.eu/>) funded by Horizon 2020 under the SPIRE-PPP Initiative. This project aims to advance the sustainability of European manufacturing and process industries and to encourage a culture of improvement within process industries by assisting the decision-making process, supporting the development of improvement strategies and helping define the priorities to improve the company's environmental and economic performance. The invited session organizers are currently working in this project together with researchers from 14 other European institutions and manufacturing companies.

Process industries represent an important portion of European manufacturing industry (around 20%), employing 6.8 million citizens and generating more than 1,600 billion € turnover. This industry is highly dependent on resources availability and imports from international markets, thus, being affected by price volatility of globally traded raw materials. The MAESTRI project focuses on the process industry as a representative sector that is facing both challenges and opportunities regarding its contribution to the sustainability of European manufacturing industry. Increased energy and resource efficiency in the process industry is an imperative for achieving a reduced environmental footprint and higher production systems efficiency and for increasing the competitiveness of this sector at both European and Global levels.

This special session aims to address the latest research efforts in manufacturing operations within the process industry with a focus on resource and energy efficiency.

The session will cover (but not be limited to) the following topics:

- Challenges and barriers for energy and resource management in process industry
- Lean management applications in the process industry
- Strategies for resource and energy efficiency in process industry
- Tools and methods for continuous improvement in process industries
- Resource and energy efficiency assessment tools and methods
- Industrial Symbiosis applications in process industry
- Design tools for decision making in process manufacturing
- ICT and Internet-of-Things (IoT) applications for resource and energy efficiency
- Eco-innovative products, processes and services in process industry

Contributions of any types are welcome including empirical research, literature reviews, conceptual, case studies and surveys.

Authors' guidelines and Deadline for submissions can be found in the conference website: <http://sdm-17.kesinternational.org/>

Main Contributing Researchers / Research Centres (tentative, if known at this stage):

- Researchers within MAESTRI project.
- Researchers involved in similar projects. We will be expecting contributions from other projects funded under SPIRE programme as they are particularly focused on improvements and

competitiveness in the process industry.

- Other researchers with interest on energy and resource efficiency applications in the process industry.

Website URL of Call for Papers (if any):

It will be disseminated through the Institute for Manufacturing, University of Cambridge website as well as through the MAESTRI project website.

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