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Invited session

Modeling and management of Experiences, Knowledge and Competences for Manufacturing Systems

Organized by

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Support

“Knowledge management and competence management in industrial companies” working group, affiliated to the National Research Council GDR MACS/CNRS

Abstract

For many industrial companies, preserving, developing and managing their immaterial assets are key issues. These immaterial assets are mainly composed of: experiences (contextualized knowledge, knowledge in action), general knowledge (tacit or explicit, individual or collective) and competences. Manufacturing systems are often socio-technical systems in which human actors still play major roles, especially in cognitive intensive tasks (such as problem solving or diagnosis). Taking into account this human oriented aspect of manufacturing systems requires dedicated approaches. The objective of this special session is to present and discuss novel approaches (models, methodologies) for the modeling, the control and the management of immaterial assets in the context of manufacturing systems.

List of topics

The main topics for this session are (but are not restricted to):

- knowledge engineering for industrial companies
- formalization and methodologies of experience feedback and lesson learning
- formalization and methodologies of competence systems
- integration of experience/knowledge/competence management in operational management (planning, scheduling, simulation for instance)
- information systems to support experience/knowledge/competence access
- collaborative practices supported by experience/knowledge/competence
- link between experience/knowledge/competence management and industrial performance
- social dimension of experience/knowledge/competence management

Keywords

Experience, lesson learned, knowledge, competence