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Special Session on

“Knowledge based automated production systems and services –enabled by data analytics”

Organized by

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Call for Papers

Theme: Automation systems are increasingly discovering the opportunities to offer new and original functions and services by data analytics, providing additional information from the operation phase for both engineering and operation / maintenance phase. The domain specific constraints of the automation domain, e.g. real time, dependability, lead to new requirements and challenges for data analytics.

This Special Section on “data analytics enabling knowledge based automated production systems and services” is focused on the development, adoption and application of data analytics for automated production systems, especially to learn and gain knowledge based automated production systems.

Topics of interest include, but are not limited to:

- Learning from data (algorithms, methods, procedures)
- Learning from process data
- Combining process and engineering data
- From data to information
- Knowledge representation (model, implementation on embedded systems)
- Agent technology and service based systems
- Visualization of data and information (for operators during operation and application engineers in the engineering phase)
- Acceptance of knowledge based automated production Systems
- Services available from data analytics
- Tool chains, platforms, and frameworks
- Security aspects
- Real time requirements and dependability of data based decisions
- Case studies and successful application reports (academia and industry)

The use of data analytics also opens up new application areas for automation systems.
Examples include but are not limited to:

- web-of-things in the factory line
- Industrie 4.0 and Cyber Physical Production Systems