Call for Papers
KI - Künstliche Intelligenz

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Special Issue: Smart Production

Special Issue Guest Editors:
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Smart Production is key for industrial and societal growth, providing opportunities for designing our future work life. This special issue targets to illustrate the requirements and challenges of a smart production which targets not only cyber-physical systems as enabler technology and AI-based robots in production but also solutions for supporting humans in production. For a beneficial use of AI, the necessary infrastructure must be provided. This includes currently used communication protocols and proposed architectures, as well as production systems. Also, contributions concerning the role of AI in context of robots and human workers, respectively, and industrial use-cases are invited.

Contributions to the following topics are sought:
* Methodological and technological prerequisite for smart production from an AI perspective
  Lean automation as a base concept for self-organizing factory
  Edge computing and architecture
  Intelligent production control/semantic OPC-UA
  Base system for production plants for an efficient variability of a production process

* Current AI applications from research and industry
  Smart HMI
  Advanced analytics and predictive maintenance

* AI-based robotics in production
  Robot assembly/disassembly planning
  Knowledge representation and processing for robots
  Cognition-enabled manipulation
  Robot Safety
  Robotic logistics processes
  Perception for grasping and manipulation
  Force and tactile sensing in robot assembly
  Compliant assembly

Contributions are welcome in form of a Technical Report (6-8 pages) or a Project Report (4-6 pages). Please contact the Guest Editors before submission for details!