



Call for Papers

SS02 - Challenges of Machine Learning in Intelligent Technical Systems

Organized and Co-Chaired by

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❖ **FOCUS.** Machine learning techniques have achieved outstanding performances in numerous computing problems. But the requirements of technical systems still pose considerable challenges for data-driven machine learning methods. Challenges lie in the nature of available data resulting in uncertainties, conflict, incompleteness, low quality, and sparsity. On the other hand, technical systems require learners and models which are able to run in real-time, on limited hardware, are interpretable, robust, highly accurate, adaptable, and secure.

❖ TOPICS

- ❖ Feature selection and extraction
- ❖ Information fusion systems
- ❖ Machine learning on resource limited hardware
- ❖ Robust machine learning in light of uncertain and error-prone data
- ❖ Explainable machine learning models
- ❖ Cognitive computing
- ❖ Reinforcement learning in industrial environments
- ❖ Learning on streaming data
- ❖ Adapting models in non-stationary environments

❖ **AIM.** This special session aims to address and improve upon the state of the art on machine learning in technical systems. We encourage submission of papers on advanced machine learning methods that identify challenges in technical applications and demonstrate the potentials, but also limitations, of novel approaches. Supported technical applications range from, but are not limited to, predictive maintenance and analytics, quality management, product design, assistance systems, optimization, and computer vision.

❖ **CONFERENCE FORMAT.** The conference will comprise multitrack sessions for regular papers, to present significant and novel research results with a prospect for a tangible impact on the research area and potential implementations, as well as work-in-progress (WIP) and industry practice sessions.

❖ AUTHOR'S SCHEDULE (2020)

❖ Regular and special sessions papers

Submission deadline April 1
 Acceptance notification May 6
 Deadline for final manuscripts June 17

❖ Work-in-progress/ Industry practice papers

Submission deadline May 13
 Acceptance notification June 10
 Deadline for final manuscripts June 17