

Special Issue on Machine Learning and Data Engineering in Robotics

Guest Co-Editors: **Prof. Sven Behnke** (University of Bonn, Germany)

Prof. Dana Kulić (University of Waterloo, Canada)

Prof. Kimitoshi Yamazaki (Shinshu University, Japan)

Editor: **Dr. Komei Sugiura** (NICT, Japan)

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With the growth of sensor data and networked devices, machine learning has been gaining interest both in robotics and many other disciplines. The collaboration between machine learning and data engineering in robotics could have a strong impact on the way robots or services help our lives as well as on deepening our understanding of human intelligence.

This special issue attempts to showcase state-of-the-art studies ranging from sensor data management through learning real-world data or behaviors as well as probabilistic models in constructive approaches. Emphasis will be given to novel algorithms and theories in the field, quantitatively comparable research results, robotic applications that help people, and constructive approaches that model human cognitive skills.

We solicit original and high-quality papers on machine learning and data engineering in robotics. We also solicit survey papers that discuss open challenges and state-of-the-art techniques. Topics of interest include, but are not limited to:

- * Probabilistic models and reasoning
- * Scene understanding
- * Imitation learning
- * Neural networks
- * Generic object recognition
- * Motion recognition
- * Data compression
- * Symbol grounding
- * Cyber-physical systems
- * Feature description
- * Symbol emergence in robotics
- * Big data
- * Sensor fusion
- * Language acquisition
- * Cloud robotics
- * Multimodal learning/interaction
- * Reinforcement learning
- * Service robots
- * Robot dialogue

Submission: Your complete manuscript (either PDF file or MS word file) should be submitted by July 14, 2015 to the office of Advanced Robotics, the Robotics Society of Japan through our homepage (http://www.rsj.or.jp/advanced_e/submission). Instruction to the authors and the sample formats of the manuscript are also available there. Please send another copy to Dr. Komei Sugiura (komei.sugiura@nict.go.jp) as well for the confirmation.