

Call for Papers

IEEE Transactions on Human-Machine Systems: Special Issue on “Situation, Activity and Goal Awareness in Cyber-physical Human-Machine Systems”

Recent advances in sensing technologies, the Internet of Things, pervasive computing and smart environments have led to a new wave of cyber-physical applications. These applications require human-machine systems to support context awareness, learning and cognitive capabilities, personalization and adaptation. Intelligent analysis and semantic interpretation of events, behaviors, and environmental states are key to the success of such cyber-physical human-machine systems. There has been a shift of sensor observation modeling, representation, interpretation and usage, namely from low-level raw observation data and their direct/hardwired usage, data aggregation and fusion, to high-level formal context modeling, activity recognition and behavior analysis and change detection. It is envisioned that this trend will continue towards a further higher level of abstraction, achieving situation, activity and goal awareness to facilitate enhanced human-machine systems and human-system interaction. This special issue focuses on decision support systems where sensor data analysis enables inferring situations, activities and goals. It solicits theory and application with system prototyping and human participant evaluations.

Topics of interest include but not limited to:

- Context and situation modelling, representation and inference with evaluation using human generated data
- Activity and goal modelling, representation and recognition with evaluation using human generated data
- Behaviour analysis, change detection and pattern recognition with evaluation using human generated data
- Advanced HMS features such as personalisation, adaptation, and cognitive learning with evaluation using human generated data
- Prototyping and evaluation with human participants of situation-, activity- and goal-aware HMSs in proof of concept applications

Important Dates:

Paper submission due date	February 28, 2016
Completion of first round of reviews	April 1, 2016
Revised manuscript due date	July 1, 2016
Final decision notification	August 1, 2016
Final version of the manuscript due	September 1, 2016

Papers should be submitted to <https://mc.manuscriptcentral.com/thms> with a cover letter including the statement “This manuscript is submitted for the special issue on Situation, Activity and Goal Awareness”. For detailed submission information, please refer to “Information for Authors” at <http://www.ieeesmc.org/publications/transactions-on-human-machine-systems/information-for-authors>

Guest Editors:

Liming Chen, De Montfort University, UK, liming.chen@dmu.ac.uk (Main contact)
Diane J. Cook, Washington State University, USA, cook@eecs.wsu.edu
Bin Guo, Northwestern Polytechnical University, China, guobin.keio@gmail.com
Liming Chen, Ecole Centrale de Lyon, France, liming.chen@ec-lyon.fr
Wolfgang Leister, Norsk Regnesentral (NR), Norway, wolfgang.leister@nr.no