

# SMC 2016

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<http://www.smc2016.org/>

## Special Session Call for Papers

### SMC2016 Special Session on **Machine Learning with Big Data** Organized by IEEE SMC Technical Committee on Computational Intelligence

#### Co-organizer(s):

Call for Papers

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Machine learning is a subfield of computer science that evolved from the study of pattern recognition and computational learning theory in artificial intelligence. Machine learning explores the study and the construction of algorithms which learn from data to make decisions for future data. Such algorithms build a model from example inputs to make data-driven predictions or decisions, rather than following strictly static program instructions.

“Big data” refers to the datasets being so large and complex, that becomes difficult to process using conventional database management and data analysis tools. Big data introduces great challenges to data collection and storage technologies. These challenges include capturing, storing, searching, sharing, transferring, analyzing, and visualizing big data. Learning the underlying knowledge from big data is one of the most important issues of big data researches. Big data brings an unprecedented challenge to traditional theories and algorithms of machine learning. The proper representation and effective handling of the underlying knowledge in big data yield a significant influence on the storage and the usage of big data.

In order to share the latest progresses, current challenges, and potential applications of machine learning for big data, we are very pleased to propose this special session in IEEE SMC-2016.

Indicative Topics/Areas: Data size and feature space adaptation, Uncertainty modeling in learning from big data, Distributed learning techniques in uncertain environment, Cloud computing for big data, Feature selection/extraction, Sample selection, Learning from sparse datasets, Manifold Learning on big data, Uncertainty in Classification / Regression / Clustering, Imbalance learning in big data, Active learning in big data, Ensemble learning, Parallel computation, Computational complexity analysis, Performance evaluation.

#### Important Dates

April 15, 2016: Deadline for submission of full-length papers to special sessions.

May 25, 2016: Acceptance/Rejection Notification.

June 09, 2016: Final camera-ready papers due in electronic form.

#### Submission

Manuscripts for a Special Session should **NOT** be submitted in duplication to any other regular or special sessions and should be submitted to SMC 2016 main conference online submission system on SMC 2016 conference website.

All submitted papers of Special Sessions have to undergo the same review process (three completed reviews per paper). The technical reviewers for each Special Session paper will be members of the SMC 2016 Program Committee and qualified peer-reviewers to be nominated by the Special Session organizers.