

Call for Papers

Special Issue on

“Efficient and Rapid Machine Learning Algorithms for Big Data and Dynamic Varying Systems”

IEEE Transactions on Systems, Man, and Cybernetics: Systems

A special issue of the IEEE Transactions on Systems, Man, and Cybernetics: Systems will be focusing on Efficient Learning Algorithms for Big Data and Dynamic Varying Systems. Prospective authors are invited to submit their original unpublished contributions for consideration by this special issue. Comprehensive tutorial and survey papers will also be considered.

With the exponential growth of data and complexity of systems, fast machine learning/artificial intelligence and computational intelligence techniques/solutions are needed. Many conventional computational intelligence techniques face bottlenecks in learning (e.g., intensive human intervention and convergence time). However, efficient learning algorithms (e.g., Extreme Learning Machines (ELM), random forest, Random Kitchen Sink (RKS), FastFood, Random Vector Functional Links (RVFL), QuickNet, etc) alternatively offer significant benefits including fast learning speed, ease of implementation and minimal human intervention.

The need for efficient and fast implementation of machine learning techniques in big data and dynamic varying systems poses many research challenges. This special issue seeks to explore novel research investigations in the related areas.

Topics of interest:

Topics of interest include but are not limited to:

Learning algorithms

- Time series prediction
- Fast modeling and simulation
- Real-time learning and reasoning
- Sequential/incremental learning
- Parallel and distributed computing for large system
- Fast super / ultra-large-scale data analytics
- Fast implementation of deep learning with ELM

Applications

- Large social media applications
- Large video data analytics
- Large Internet of Things (IoT) applications
- Large security systems
- Large autonomous systems
- Large mobility systems
- Various dynamic varying systems

Paper submission:

Potential authors may submit their full-length manuscripts for publication consideration through the journal manuscript submission system

<https://mc.manuscriptcentral.com/systems>. All the submissions will go through rigorous peer review.

Important dates:

Manuscript Submission Deadline:	August 31, 2016
Notification of Paper Decision:	November 15, 2016
Revised Paper Submission Deadline:	January 15, 2017
Final Paper Submission Decision:	February 28, 2017
Publication Date:	April, 2017

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