SMC2014 Special Session Call for Papers
Autonomous Learning and Evolving Intelligence

Special Session organizer

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Important Dates

April 7, 2014
Submission of a full-length paper

May 25, 2014

Acceptance/Rejection notification

July 9, 2014

Final camera-ready paper submission

Synopsis

The special session is focussed on addressing autonomous learning in computational systems in a setting where the role of the human is to merely to start/stop the process and monitor it online. It is a specific branch of machine learning, where the computer system is expected to learn for itself within a dynamically evolving and challenging environment complex processes without heuristic input or prior training. To achieve autonomous learning, a computer develops a form of intelligence that can evolve and adapt to its surroundings. A system that learns and evolves automatically should also operate in real-time. Currently DARPA have a challenge running for robots to operate autonomously in inhospitable environments; NSF is also recognising autonomous learning as a significant topic of research; large companies such as IBM, BT etc. also have programmes in autonomic computing and related disciplines. The objective of the proposed special session is to bring together people from academia and industry to introduce papers that look at addressing some of the fundamental problems or stumbling blocks found when a computer must learn for itself and evolve to it's surroundings.

Indicative Topics/Areas (not limited to)

- Autonomous Learning
- Autonomous Video Analytics
- Intelligence and Adaptive Systems
- Adaptive and Self-calibrating Sensor Systems
- Autonomous Fuzzy rule-based Systems
- Anomaly Detection
- Fault Detection and Identification
- Evolving Clustering
- Evolving Classification Methods
- Adaptive Behaviour Models
- Robotic Systems

Submission details

Papers should not exceed 8 pages in length, papers over 6 pages in length are charged extra per page (up to a max of 2). Manuscript for a Special Session should NOT be submitted in duplication to any other regular or special session and should be submitted to SMC 2014 main conference online submission system on SMC 2014 conference website. All submitted papers of Special Session have to undergo the same review process (at least two reviewers). The technical reviewers for each Special Session paper will be members of the SMC 2014 Program Committee and qualified peer-reviewers to be nominated by the Special Session organizers.