Call for Papers

Symposium on Biomorphic Circuits and Systems with Threshold Logic (BioTL 2014)

2014 Annual International Conference on Biologically Inspired Cognitive Architectures (BICA 2014) November 7-9 (Friday-Sunday): Massachusetts Institute of Technology, Cambridge, MA 02139, United States
http://biomicrosystems.info/biotl2014

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Chair / Organizer

Alex Pappachen James;
Enview R&D Labs LLP; and
Nazarbayev University

Important dates

Abstract and Paper Submission Due - May 26* 2014
Paper Review Feedback - June 14*
Final Papers Due - August 01
Submissions are accepted in the following categories:
(1) BICA journal paper (Letter or full Research Article)
(2) Procedia Computer Science paper (limited to 6 pages)
(3) unpublished abstract to be included in the conference brochure
For submission details visit: http://biomicrosystems.info/biotl2014/submission

The duality of the neuron networks to memorize objects and learn concepts in a hierarchical and modular manner along with sparse processing of information are considered essential to biomorphic computing systems.

Biomorphic brain systems rely on the use of any type of thresholds in the process of information processing and decision making. Some of the intelligent systems that make use of threshold logic are: (1) Artificial neural networks, (2) Neuro-fuzzy architectures, (3) threshold logic gates, (4) hierarchical temporal memories, and (5) deep learning networks.

The research contributions are welcome in the following topics that target at building brain computing systems within the scope of biomorphic circuits and systems using threshold logic:

- Philosophy and science of threshold logic and functions
- Memristive and resistive networks;
- Threshold logic gates; Pattern Recognisers
- Emerging memory technologies for threshold logic systems
- Devices, circuits and systems emulating threshold logic
- Hybrid networks – neural and fuzzy systems incorporating threshold logic
- Future computer networks utilising biomorphic algorithms
- Future computer architectures using threshold logic
- Biomorphic information and decision fusion
- Biomorphic cloud and distributed computing
- Deep learning architectures using threshold logic
- Neuromorphic Vision and CMOS sensors
- Medical and biological studies related to threshold logic

SUBMIT PAPERS

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