Dynamical Systems and Brain Inspired Computing

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Message from the Guest Editors

This Special Issue focuses on the above questions and the challenges in the development of novel computing architectures inspired by artificial intelligence algorithms and by how the brain processes information. The topics include, but are not limited to the following:

- Reservoir computing, Ising machines, and accelerators for artificial neural networks
- Novel methods for using dynamical systems for information processing
- Theoretical analysis of information processing capability of dynamical systems, including methods based on information theory and entropy
- Experimental implementations of brain-inspired computing, including optical and (unconventional) electronic implementations
- Practical applications of such systems, for instance to telecommunications
- Connections to other areas such as neuroscience or soft robotics

Special Issue

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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