Special Issue

Memory Storage Capacity in Recurrent Neural Networks

Message from the Guest Editors

A neural network (NN) is an ensemble of simple analog-signal-processing units. Recurrent neural networks (RNNs) are a general class of neural networks with node connections defined by a bidirectional "coupling matrix". This architecture produces recursive dynamics in which the network state depends on previous ones. Hopfield neural networks are the simplest structure of RNN; these NNs are widely used as storage devices capable of storing patterns and can model "associative memory".

This Special Issue on Hopfield RNN and its storage capacity invites researchers to present state-of-the-art approaches. The topics relevant to this Special Issue include but are not limited to the following:

   Theory of Hopfield RNN;
   New information theories based on novel learning strategies;
   Optimization of Hopfield RNN architecture;
   RNN models of memory storage;
   RNN for brain-inspired machine learning and biological modeling.

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Deadline for manuscript submissions

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Entropy

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About the Journal

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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