Special Issue

Information Processing in Neuromorphic Systems

Message from the Guest Editors

Neuromorphic computing seeks to develop algorithms and hardware inspired by biological neural systems. By leveraging event-driven communication, parallelism, temporal dynamics, adaptive learning, and neuron-based computation, these architectures enable novel approaches to information encoding and processing. Information theory, a mathematical framework for quantifying, storing, and transmitting information, provides a powerful toolset for analyzing these emerging systems. Additionally, complexity theory offers insights into the computational efficiency of neuromorphic architectures, while computability theory explores their fundamental limits relative to classical models of computation. Submissions to this Special Issue entitled 'Information Processing in Neuromorphic Systems' are solicited, spanning a range of topics such as (but not limited to) the following:

- Information-theoretic analysis of neuromorphic encoding and computing;
- Computational complexity of neuromorphic approaches;
- Theoretical limits and computability of neuromorphic systems.

Guest Editors

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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.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Editor-in-Chief

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