Special Issue

Mathematical Models and Novel Data-Analyzing Methods in Neuroscience

Message from the Guest Editors

Neuroscience is one of the fastest growing elements of natural science. Recent advances in neurotechniques have greatly accelerated neuroscience research and accumulated a vast amount of data. However, even with the growing numbers of neuroscience experiments, these experimental studies are not yet sufficient to unveil the functional meaning of the observations made, or their underlying mechanisms. Data analyzing methods and mathematical models are essential approaches to understanding the dynamics of neural systems and their implications in information processing. Therefore, this Special Issue aims to present the recent studies on both mathematical models and data-analyzing methods in neuroscience. Those studies include, but are not limited to, novel methods analyzing electrophysiology data, models for subcellular structure, synapses, neurons, neuroglia cells, and neuronal networks. Additionally, abstract models and brain-inspired learning algorithms are welcome.

Guest Editors

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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