Memristor Cellular Nonlinear Networks: Theory and Applications

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Deadline for manuscript submissions:
closed (31 May 2024)

Message from the Guest Editors

Dear colleagues,

Further development of memristor-based cellular nonlinear networks (MCNN), including conventional applications, is necessary from the point of view of the current market need for new nanoelectronic circuit architectures. MCNNs working on the edge of chaos can exhibit very complex behavior. The application of a new excitable medium in investigations to detect the global motion of excitable waves, and transferring this to the analysis of more complex systems such as brain networks and social networks, is particularly challenging.

In this Special Issue, the following topics will be covered:

- MCNNs operating on edge of chaos;
- Simulations of MCNNs operating on edge of chaos regime;
- Pattern formation in MCNN models;
- Simulation of MCNNs operating on edge of chaos regime;
- Applications of MCNNs.

Theoretical and simulation results for MCNNs will be in complete concordance, demonstrating that conventional, very large-scale integration technology could be an ideal medium for studying the complex behavior of different models.

Special Issue

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Message from the Editor-in-Chief

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