

Special Issue on
**Boolean Networks and Their Applications
in Science and Engineering**

CALL FOR PAPERS

In the last decades, Boolean networks (BNs) have emerged as an effective mathematical tool to model not only computational processes, but also several phenomena from science and engineering. For this reason, the development of the theory of such models has become a compelling need that has attracted the interest of many research groups in applied mathematics in recent years. Dynamics of BNs are traditionally associated with complexity, since they are composed of many identical elemental units whose behavior is relatively simple in comparison with the behavior of the entire system.

BNs are a generalization of other relevant mathematical models, which appeared previously as cellular automata (CA), inspired by von Neumann and suggested by Wolfram for computation modeling, or Boolean network (BN), proposed by Kauffman in 1969 for gene regulatory networks. This gives an idea of the versatility of this new paradigm in applications to several branches of science (mathematics, physics chemistry, biology, ecology, etc.) and engineering (computation, artificial intelligence, electronics, circuits, etc.).

The aim of this special issue is to collect cutting-edge research on the different models of BNs (deterministic and nondeterministic, synchronous and asynchronous, homogenous and nonhomogenous, directed and undirected, regular and nonregular, etc.). We encourage research groups in this field to submit their current developments and future research directions concerning new models. Particularly, original research articles showing applications of BNs in science and engineering are welcome. In addition, submissions of review articles, which describe the state of the art of any of the classical models, are encouraged.

Potential topics include but are not limited to the following:

- BNs dynamics
- BNs topology
- BNs control
- Algorithms, methods, and software for the exploration of BNs
- Applications of BNs in science and engineering
- Related topics in science and engineering

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/complexity/bnse/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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