

Special Issue on **Discrete Dynamics of Nonlinear Systems in Nature and Society**

CALL FOR PAPERS

The aim of this special issue is to provide an opportunity for researchers to report on recent progresses in the discrete dynamics of nonlinear systems arising in nature and society. Both the determination of the qualitative features of solutions of discrete nonlinear dynamical models and the analysis of simulation techniques to approximate the solutions are of special interest. Papers that study the existence and uniqueness of solutions of nonlinear systems as well as relevant features of solution spaces are especially welcome. Works which emphasize the rigorous analysis of models to simulate the dynamics of complex models in nature and society are solicited for this special issue.

This issue will not make emphasis on particular mathematical modeling of discrete dynamics of nonlinear systems, but rather on the investigation of analytical features of the solutions of underlying problems and the analysis of techniques to simulate them. Both deterministic and stochastic models arising in nature and society are considered, and pertinent applications to the resolution of practical problems are expected.

Potential topics include but are not limited to the following:

- ▶ Deterministic and stochastic nonlinear models in nature and society
- ▶ Discrete nonlinear systems and simulation techniques
- ▶ Integer- and fractional-order systems
- ▶ Existence and uniqueness of relevant solutions
- ▶ Approximation theory
- ▶ Discrete methods for the simulation of nonlinear models (finite differences, finite elements, finite volumes, quadrature methods, etc.)
- ▶ Structure-preserving models
- ▶ Efficiency, accuracy, stability, and convergence analyses
- ▶ Positivity, boundedness, convexity, or monotonicity
- ▶ Multiphysical applications

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

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

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