



Journal of Computational and Nonlinear Dynamics

Special Issue on Nonlinear Dynamics: Models, Behavior, and Techniques

Nonlinear dynamical systems have wide relevance to many fields, including engineering. Many techniques, including analytical and numerical ones, have been developed to qualitatively and quantitatively study the properties of nonlinear dynamical systems. With the rapid development of computational methods and tools, the interest in studies on nonlinear dynamical systems has grown substantially. The new computational resources have helped gain new insights into nonlinear phenomena across a range of systems.

The main focus of this special issue is to promote the exchange of new ideas, methods (primarily analytical and numerical) and their use in studies of nonlinear dynamics. Applications encompassing real-world problems related to the fields of engineering, in particular, aerospace, mechanical, ocean and civil engineering fields are welcome.

Topics of interest include the following:

- nonlinear models
- fractional order systems
- perturbation and computational techniques
- dynamic stability, bifurcations, and control
- chaos, fractals, pattern formation, and rare events in nonlinear physical, engineering and biological systems
- transient/extreme dynamics
- complex behavior
- computational fluid dynamics
- mathematical physics
- signals and systems

Important Dates

Paper submission: Open until deadline of August 1, 2017

Publication (tentative): 4th Quarter, 2018

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If the journal web tool is used, please direct your submission to the special issue on “Computational Nonlinear Dynamics”.

All submitted papers will be peer-reviewed according to the usual standards of the journal, and the papers will be evaluated based on originality, quality, and relevance to this special issue and the journal. The submitted papers should be formatted according to the journal style as described on the journal homepage. Submitted papers must not have been published previously, nor be under consideration for publication elsewhere.