Special Issue

New Perspectives in Bifurcations Analysis of Dynamical Systems

Message from the Guest Editors

Bifurcation theory is essential in understanding how dynamical systems transition between different states under parameter variations. Our focus will be on bifurcations in differential systems, particularly delay and neutral differential equations, which introduce infinite-dimensional dynamics and memory effects. Topics of interest include center manifold reduction, normal form theory, stability analysis, Lyapunov theory, and nonlinear dynamics in delayed and coupled systems. Special attention will be given to Hopf, Bogdanov–Takens, zero-Hopf, and double-Hopf bifurcations, as well as global bifurcations such as homoclinic and heteroclinic phenomena. We invite contributions presenting novel analytical approaches, computational techniques, and applications in fields such as biological systems, neural networks, and control theory. Submissions integrating theoretical bifurcation analysis into numerical simulations and experimental validation are particularly welcome.

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Axioms is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

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