



Mathematical Modeling and Simulation of Oscillatory Phenomena

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Message from the Guest Editors

Oscillatory phenomena have been observed in many dynamical systems encountered in natural sciences and technology. Much of physiology operates in an oscillatory manner, including in the examples of hormone oscillations, oscillatory gene expressions, and oscillation in muscles; oscillation processes are also observed in ecosystem populations, biochemistry, mechanics, population dynamics and there are thermodynamic oscillations, oscillations in market economies, and so on. This Special Issue focuses on the modeling and simulation of nonlinear dynamical systems of various nature that exhibit oscillation as their fundamental mode of behavior. Papers are invited from those who work on oscillation theory or in any one of the areas in which existing tools and methods are applied to investigate the oscillatory phenomena of a given dynamical system modeling a real-world problem. Having in mind that the delay is one of the major causes of oscillations in dynamical systems, we are particularly interested in (but not exclusively) the oscillation theory of time-delay systems.





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Message from the Editor-in-Chief

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