Mathematical Modeling and Simulation in Mechanics and Dynamic Systems

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Message from the Guest Editors

Although it is considered that in the field of mechanics it is difficult to make further contributions, the spectacular evolution of technology and numerical calculation techniques have made these opinions to be reconsidered and to develop more and more sophisticated models, which should surprise, as accurately as possible, the phenomena that take place in dynamic systems. Therefore, the researchers have come to study mechanical systems with complicated behavior, observed in experiments and in computer models. The key requirement is that the system involves a nonlinearity. The impetus in mechanics and dynamical systems has come from many sources: computer simulation, experimental science, mathematics, and modeling. There are a wide range of influences. Computer experiments change the way in which we analyze these systems.

Topics of interest include, but are not limited to, modeling mechanical systems, new methods in dynamic systems, behavior simulation of a mechanical system, nonlinear systems, multibody systems with elastic elements, multi-degrees of freedom, mechanical systems, experimental modal analysis, and mechanics of materials.

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Special Issue

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Message from the Editor-in-Chief

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