



mathematics



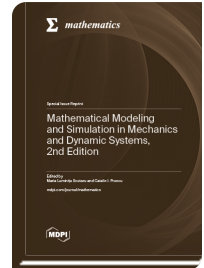
Special Issue Reprint

Mathematical Modeling and Simulation in Mechanics and Dynamic Systems, 2nd Edition

www.mdpi.com/books/reprint/8972

Edited by
Maria Luminița Scutaru
Catalin I. Pruncu

ISBN 978-3-7258-0209-8 (Hardback)
ISBN 978-3-7258-0210-4 (PDF)



Although it is considerably infeasible to make further contributions to the field of mechanics, the spectacular evolution of technology and numerical calculation techniques has played a significant role in the reconsideration of this opinion and in the development of an increasing number of sophisticated models. In turn, the outcomes of these state-of-the-art methodologies have surprised scholars due to the phenomena that occur in dynamic systems. Hence, researchers began studying mechanical systems with complicated behaviors, which can be observed by carrying out experiments and using computer models.

The impetus in mechanics and dynamical systems has come from many sources: computer simulation, experimental science, mathematics, and modeling. Moreover, the key requirement for a successful observation is a nonlinearity, which the system must involve. However, it is vital to acknowledge that there is a wide range of influences that affect these systems, and computer experiments change the way in which we analyze them.

Thus, this Special Issue includes topics such as modeling mechanical systems, new methods in dynamic systems, behavior simulations of mechanical systems, nonlinear systems, multibody systems with elastic elements, multi-degrees of freedom, mechanical systems, experimental modal analysis, and mechanics of materials.



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