



*Special Issue Reprint*

## Advances in Mechanical Systems Dynamics

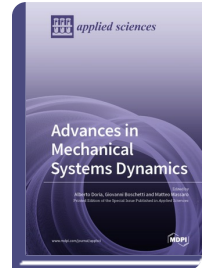
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Edited by

Alberto Doria

Giovanni Boschetti

Matteo Massaro



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Modern dynamics was established many centuries ago by Galileo and Newton before the beginning of the industrial era. Presently, we are in the presence of the fourth industrial revolution, and mechanical systems are increasingly being integrated with electronic, electrical, and fluidic systems. This trend is present not only in the industrial environment, which will soon be characterized by the cyber-physical systems of industry 4.0, but also in other environments like mobility, health and bio-engineering, food and natural resources, safety, and sustainable living. In this context, purely mechanical systems with quasi-static behavior will become less common and the state-of-the-art will soon be represented by integrated mechanical systems, which need accurate dynamic models to predict their behavior. Therefore, mechanical system dynamics are going to play an increasingly central role. Significant research efforts are needed to improve the identification of the mechanical properties of systems in order to develop models that take non-linearity into account, and to develop efficient simulation tools. This Special Issue aims at disseminating the latest research achievements, findings, and ideas in mechanical systems dynamics, with particular emphasis on applications that are strongly integrated with other systems and require a multi-physical approach.



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