

Mathematical Modeling and Simulation in Mechanics and Dynamic Systems

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1. Introduction

Although it has previously been considered difficult to make further contributions in the field of mechanics, the spectacular evolution of technology and numerical calculation techniques has caused this opinion to be reconsidered and to the development of more and more sophisticated models that describe, as accurately as possible, the phenomena that take place in dynamic systems. Therefore, researchers have come to study mechanical systems with complicated behavior, observing them in experiments and computer models [1–3]. The key requirement in these studies is that the system must involve a nonlinearity. The impetus in mechanics and dynamical systems has come from many sources: computer simulation, experimental science, mathematics, and modeling [4–6]. 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, the behavior simulation of mechanical systems, nonlinear systems, multibody systems with elastic elements, multiple degrees of freedom, mechanical systems, experimental modal analyses, and the mechanics of materials.

2. Statistics of the Special Issue

The statistics of papers submitted to this Special Issue for both published and rejected items are as follows: 23 total submissions, of which 16 were published (69.6%) [7–23] and 7 rejected (30.4%). The authors' geographical distribution is shown in Table 1, where it can be seen that the 67 authors are from 13 different countries. Note that it is usual for a paper to be written by more than one author, and for authors to collaborate with authors with different affiliations or multiple affiliations.

Table 1. Geographic distribution of authors by country.

Country	Number of Authors
Romania	13
China	9
Iran	1
Italy	2
Pakistan	1
UK	3
Morocco	5
Korea	4
Bulgaria	1
Australia	4
Spain	12
Slovakia	7
Hungary	3



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3. Authors of the Special Issue

The authors of this Special Issue and their main affiliations are summarized in Table 2; it can be seen that there are three authors on average per manuscript.

Table 2. Affiliations and bibliometric indicators for authors.

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4. Brief Overview of the Contributions to the Special Issue

This analysis of topics identifies or summarizes the research undertaken. This section classifies the manuscripts according to the topics covered in this Special Issue. There are three topics that are dominant, namely: the modeling of the multibody systems with symmetries, symmetry in applied mathematics, and analytical methods in symmetric multibody systems.

Author Contributions: Conceptualization, M.L.S. and C.-I.P.; methodology, M.L.S. and C.-I.P.; software, M.L.S. and C.-I.P.; validation, M.L.S. and C.-I.P.; formal analysis, M.L.S. and C.-I.P.; investigation, M.L.S. and C.-I.P.; resources, M.L.S. and C.-I.P.; data curation, M.L.S. and C.-I.P.; writing—original draft preparation, M.L.S. and C.-I.P.; writing—review and editing, M.L.S. and C.-I.P.; visualization, M.L.S. and C.-I.P.; supervision, M.L.S. and C.-I.P.; project administration, M.L.S. and C.-I.P. All authors have read and agreed to the published version of the manuscript.

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