

Multibody Systems with Flexible Elements

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1. Introduction

The formalism of multibody systems offers a means of computer-assisted algorithmic analysis and a means of simulating and optimizing an arbitrary movement of a possible high number of elastic bodies in the connection. The domains where researchers apply these methods are robotics, simulation of the dynamics of vehicles, biomechanics, aerospace engineering (helicopters, the behavior of cars in the gravitational field), internal combustion engines, gearboxes, transmissions, mechanisms, the cellulose industry, simulation of particle behavior (granulated particles and molecules), dynamic simulation, military applications, computer games, medicine, and rehabilitation. As a result, multibody systems have become widely used in all industries, such as in automotive engineering, aerospace engineering, construction, and manufacturing [1–8]. It is for these reasons that there is continuous research into the development of the field. Some of this research is presented in this volume, in which a large group of researchers will present their latest findings. We hope that researchers will find an interesting and useful volume of information for their future work, but that the results will also be used by engineers for practical applications.

2. Statistics of the Special Issue

The statistics of papers called for this Special Issue, related to published or rejected items, are as follows [9–23]: 26 total submissions, of which 15 were published (57.6%) and 11 rejected (42.3%). The authors' geographical distribution is shown in Table 1, and it can be seen that the 38 authors are from 9 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	22
Saudi Arabia	3
India	2
China	5
Egypt	3
Vietnam	2
Iran	2
UK	1
Poland	1

3. Authors of the Special Issue

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

Table 2. Affiliations and bibliometric indicators for authors.

Author	Affiliation	References
Marilena Ghitescu	Transilvania University of Brasov, Romania	[9,12,13]
Ioan-Marius Ghitescu	Transilvania University of Brasov, Romania	[9,12,13]
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Calin Itu	Transilvania University of Brasov, Romania	[14]
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Table 2. Cont.

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4. Brief Overview of the Contributions to the Special Issue

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

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

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