Preface

Sung-Soo Kim¹ · Jinhwan Choi² · Jorge A.C. Ambrosio³

Received: 29 February 2016 / Accepted: 8 March 2016
© Springer Science+Business Media Dordrecht 2016

As one of the rapidly growing branches of mechanical engineering, multibody system dynamics has become an important discipline for machine design and computational analysis of complex articulated mechanical system. This importance is recognized in the major multibody dynamics conferences where various cutting edge information is promoted on the theory and application of multibody systems such as formulations of multibody systems, biomechanics, vehicle system dynamics, mechanical systems with contact problems, robotics, and controlled mechanical systems. The 3rd Joint International Conference on Multibody System Dynamics (IMSD 2014) and the 7th Asian Conference on Multibody Dynamics (ACMD 2014) held together during June 30–July 3, 2014 in BEXCO, Busan, Korea, attended by approximately 340 participants from 26 countries. Besides seven keynote lectures, 70 technical sessions were held offering about 230 technical presentations.

Among those delivering papers at the IMSD 2014–ACMD 2014, selected authors, whose works are excellent in theory and applications in multibody system dynamics, were invited to revise their contributions and submit new manuscripts to a thematic issue of the *Multibody System Dynamics*. These manuscripts have gone through peer review procedure based on the editorial policies of the *Multibody System Dynamics*. The result of this effort is the thematic issue, now presented, which contains 8 papers, accepted in the peer review process, addressing in the diverse area of multibody system dynamics, such as Benchmark Problems in Multibody System Dynamics, Dynamics of All Vehicles, Efficient Methods and Real-

✉ S.-S. Kim
sookim@cnu.ac.kr

J. Choi
jhchoi@khu.ac.kr

J.A.C. Ambrosio
jorge@dem.ist.utl.pt

¹ Department of Mechatronics Engineering, Chungnam National University, Daejeon, Korea

² Department of Mechanical Engineering, Kyunghee University, Youngin, Korea

³ Instituto Superior Tecnico, Technical University of Lisbon, Lisbon, Portugal

Time Applications, Flexible Multibody Systems, Robotic Systems, Theoretical and Computational Methods, and Multibody Applications. We hope that the selected contributions presented in this thematic issue will be valuable references and will stimulate a more intensive discussion between researchers across the engineering and mathematical disciplines, thereby promoting an exchange of ideas and methods. Lastly, we acknowledge the contribution of authors and the valuable time and effort of the reviewers that have made the thematic issue into reality. We also wish to acknowledge the Steering Committee members of both IMSD and ACMD to extend our immense gratitude for their contribution to the success of the IMSD 2014–ACMD 2014.