

Preface

The first MeTrApp (Mechanisms, Transmissions and Applications) was organized in Timisoara, Romania, in 2011, as a workshop. Following the first MeTrApp, the next ones are organized every two years. The second one in the series of this conference was organized in Bilbao, Spain, in 2013, and the third one was organized in Aachen, Germany, in 2015. MeTrApp 2017 is the fourth one of the conference series organized in Trabzon, Turkey, between the dates July 3–5, 2017.

This book gathers the technical papers that are submitted and presented in the fourth Conference on Mechanisms, Transmissions and Applications co-organized by Karadeniz Technical University and Izmir Institute of Technology, Turkey.

MeTrApp conference series is organized under the patronage of International Federation for Promotion of Mechanism and Machine Science (IFToMM), and it is joint event of two technical committees of IFToMM namely “Linkages and Mechanical Controls” and “Gearing and Transmissions.” MeTrApp 2017 is the first conference of IFToMM conference series that is organized in Turkey.

MeTrApp 2017 aims to bring together the researchers, scientists, industry experts, and students from all over the world to provide them a platform to share their state-of-the-art work in the fields of mechanisms, transmissions, and their applications. Hence, promoting the exchange of ideas and collaboration is one of the expected outcomes of this conference. Another outcome of the conference is this edited proceedings book within the Springer Mechanism and Machine Science series, which enlarges the sharing platform to all researchers, scientists, industry experts, and students that are interested in the fields of mechanisms and transmissions. The content of this book is presented in six parts for the reader to easily navigate between the proceedings that fall into certain subject areas as follows: Mechanism Design, Cam Mechanisms, Parallel Manipulators, Control Applications, Mechanical Transmissions, and Dynamics of Machinery.

A total of 30 submissions and two invited talk papers were received from authors of 10 different countries for MeTrApp 2017. The invited speakers were Prof. Dr. Yavuz Yaman, Middle East Technical University, and Dr. Murat Gültekin, Aselsan Inc. After an initial plagiarism check and rigorous two-stage double-blind review process by at least two reviewers for each paper, 29 papers were accepted to appear

in this book and to be presented in MeTrApp 2017. We sincerely thank all the reviewers for their contribution to the review process timely with their strong expertise and scientific background.

We also thank all the authors for their strong will to contribute to this conference during the tough period that Turkey is going through. We believe that this displays the true spirit of the founding fathers of IFToMM—“promoting science without borders.” We thank all who helped in organizing this book and MeTrApp 2017. We thank Karadeniz Technical University, MAKTED (IFToMM Turkey), and Izmir Institute of Technology for all their support and sponsorship. Finally, we thank all the staff at Springer for all the help they provided in editing this book and their quick response times with minimal oscillations.

Our wish is that the excellent works that are presented in MeTrApp 2017 will be cherished by a larger number of readers with the help of this book, and participation to the next MeTrApp will be much higher.

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