PREFACE
SPECIAL ISSUE ON SYSTEM MODELING AND OPTIMIZATION

This issue comprises manuscripts collected on the occasion of the 28th IFIP TC7 Conference on System Modeling and Optimization held at the University of Duisburg-Essen in Essen, Germany, July 23–27, 2018. This conference is held every two years under the auspices of the Technical Committee 7, *System Modeling and Optimization*, of the International Federation for Information Processing and aims to bring together researchers working on a wide range of topics related to applied optimization such as optimal control of differential equations; modeling and simulation; inverse problems; nonlinear, discrete, and stochastic optimization; and industrial applications.

This wide range was represented by the more than 200 participants from 26 countries of the 28th IFIP TC7 Conference as well as by the 8 plenary talks and 22 minisymposia on all mathematical aspects of system modeling and optimization. In total, 190 talks were presented. The next conference in this series will be held at the Escuela Politécnica Nacional in Quito, Ecuador, and is currently scheduled for August 30 to September 3, 2021.

The ten peer-reviewed contributions in this special issue exemplify the scope of the IFIP TC7 Conference on System Modeling and Optimization and cover the full range of the above-mentioned topics, from the analysis of optimal control problems to their finite element discretizations to specific optimization and control problems in practical applications.

Among these, we would like to especially mention the two contributions coauthored by Nikolai Botkin, who unexpectedly passed away during the review process. His many works touched on all aspects of system modeling and optimization—always keeping in mind their usefulness in applications—and thus represent particularly well the spirit of the IFIP TC7 conferences, to which he was a regular contributor. We mourn his early loss and wish to extend our thoughts to his friends and family, in particular to his wife, Varvara Turova.

Finally, we would like to thank all the authors and reviewers for their original contributions and valuable assistance that make the publication of this special issue possible.

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