

Preface

Many theoretical results and methodologies developed for systems sciences and optimization are now found very useful in dealing with nonlinear dynamics and system theory as well as their high technology applications. These areas of research are interdisciplinary in nature with great potentials for high technology applications. In view of this the Guest Editors had made a call for high quality papers to be submitted to this special issue, where system science and optimization approaches are to be used in dealing with topics in nonlinear dynamics and system theory as well as their high technology applications. This is therefore the theme of this Special Issue:

System Science and Optimization Approaches to Nonlinear Dynamics and System Theory with High Technology Applications (1)

With this aim in mind, the goal of the special issue is to provide an international forum for scientists, researchers, and practitioners from both academia and industry to present their latest research findings and state-of-the-art solution methods in areas related to the theme of the Special Issue.

Scientists from many countries and regions — Australia, China, Greece, Hong Kong, Japan, India, Saudi Arabia, USA and Vietnam — accepted the invitation of the Guest Editors to submit papers for the Special Issue of the Journal. They all went through a rigorous refereeing process with at least two independent referees for each submitted paper. The number of the submitted papers exceed substantially the size of one issue, and we decided to publish two special issues. Topics included in these papers are modelling, design analysis, simulation, optimization, performance evaluation, intelligent information and technology, nonlinear stochastic systems, and optimal control. Applications involved include communication networks, engineering and management systems, computer and information technology, and knowledge management.

The completion of this volume would not have been possible without the assistance of many of our colleagues. We wish to express our sincere appreciation to all those who helped. We are deeply grateful to our referees who provided prompt and extensive reviews for all submissions. Their constructive comments contributed to the quality of the volume. In particular, we wish to thank Editor-in-Chief, Professor Anatolii A. Martynyuk for his kind cooperation and support. Our special thank also go to Mrs. Lisa Holling for her help during the editing process of this Special Issue. Last but not least, we wish to thank those authors who responded to our call for papers by submitting their papers to be considered for possible publication in this Special Issue.

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NONLINEAR DYNAMICS AND SYSTEMS THEORY

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Special Issue

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*) The issue is in preparation.