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Preface

Foreword



Included in this special issue is a selection of extended papers that were presented at "The 2nd International Conference on Applied Mathematics in Engineering (ICAME'21)" which was hosted by Balikesir University, Türkiye, from September 1 to September 3, 2021.

During the conference;

- Six plenary lectures (by Prof. Albert Luo, Prof. J. A. Tenreiro Machado, Prof. Sverre Holm, Prof. Dumitru Baleanu, Prof. Gerhard-Wilhelm Weber and Prof. Praveen Agarwal),
- Four invited talks (by Prof. Jordan Hristov, Prof. Carla Pinto, Prof. Huseyin Merdan, Prof. Amin Jajarmi), and
- A total of 143 presentations (in four parallel sessions)

have been successfully presented by over 120 participants from 27 different countries.

Bringing together the studies presented at events such as the ICAME'21 conference in a special issue of a journal with a high impact in its field will enable it to reach a wider audience and become more effective. In this way, studies can go beyond the world of thought and expression and benefits software, technology, and other emerging fields.

This special issue has received a total of 58 submissions, of which 29 have been accepted for publication. It presents recent developments in the modelling and optimization of complex real-world problems, optimal control of nonlinear systems, dynamical systems and chaos, fractional calculus and its applications in non-linear life science, population dynamics and conservation biology, biomathematical modelling, new analytical and numerical methods for differential equations, and artificial intelligence.

We would like to thank the contributing authors and referees, the journal editors who coordinated this special issue, those who organized the ICAME conference series, and the Elsevier team who made the impact of the journal permanent. We are hopeful and firmly believe that the publications included in this volume will inspire additional research and contribute to the progress of our shared comprehension of applied mathematics in solving complex engineering problems.

Necati Özdemir Balikesir University, Balikesir, Türkiye

Ramazan Yaman Istanbul Atlas University, Istanbul, Türkiye

Fatih Tank*

Ankara University, Ankara, Türkiye

E-mail addresses: fatih.tank@ankara.edu.tr, tank@ankara.edu.tr.

^{*} Corresponding editor.