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Editorial

Preface to the Special Issue "Fixed Point Theory and Dynamical Systems with Applications"

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Since the celebrated Brouwer's fixed point theorem and Banach contraction principle were established, the rapid growth of fixed point theory and its applications have led to a number of scholarly essays studying the importance of its promotion and application in nonlinear analysis, applied mathematical analysis, economics, game theory, integral and differential equations and inclusions, dynamic systems theory, signal and image processing, etc. Many authors devoted their attention to investigating generalizations in various different directions of the well-known fixed point theorems. Recent important investigations and developments in fixed point theory have focused on placing fundamental sciences in the real world.

Dynamical systems, developed initially from the work of Jay W. Forrester, focused on industrial dynamics. In approximately the last six decades, important improvements in our understanding of the real world have been achieved in various domains, such as economics, financial markets, environment, human behavior, strategic decision-making, information and knowledge management, public policy, highway transportation networks, telecommunication networks, immunological systems, computational systems, and electrical and mechanical structures. About three decades ago, linear dynamics and chaos started to attract a lot of attention, and fruitful results were obtained. Dynamical systems have been developed and applied by policy-makers, academicians, educators, and managers in many areas of natural sciences, social sciences, engineering, and mathematical sciences.

The main purpose of this Special Issue is to pay more attention to the recent advances in fixed point theory, dynamical systems, and their applications in integrating basic science into the real world. We invited researchers to contribute original and high-quality research papers, which will inspire advances in fixed point theory, dynamical systems, and their applications. The guest editors organized a comprehensive review process for each submission based on the journal's policy and guidelines. All guest editors did their best to make this Special Issue of the highest possible quality. We received 76 submissions, exceeding our expectations, 14 of which (see [1–14] for more information) were assessed though a comprehensive review process as contributing high-quality research and accepted for publication in the Special Issue (acceptance rate 18.4%). We hope that interested researchers and practitioners will read the accepted papers in this special issue and will find inspiration for future work in these exciting areas.

This Special Issue has undoubtedly succeeded in our original intention, shedding new light on several important issues and raising new problems. We would like to express our hearty thanks to the editorial team and the reviewers of Mathematics, particularly the Editor-in-Chief Prof. Dr. Francisco Chiclana, for their great support throughout the editing process of our Special Issue.

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