



Advances in the Theory of Nonlinear Analysis and its Applications

ISSN: 2587-2648

Peer-Reviewed Scientific Journal

A Special Issue: Recent Developments in Nonlinear Partial Differential Equations

Thabet Abdeljawad^a, Qasem M. Al-Mdallal^b, Zakia Hammouch^c, Fahd Jarad^d

^aDepartment of Mathematics and General Sciences, Prince Sultan University, P.O. Box 66833, 11586 Riyadh, Saudi Arabia

^bDepartment of Mathematical Sciences, UAE University, P. O. Box 15551, Al Ain, United Arab Emirates

^cFaculty of Science and Techniques, Moulay Ismail University of Meknes, Errachidia, Morocco

^dÇankaya University, Department of Mathematics, 06530 Balgat, Ankara, Turkey

The literature reveals that numerous real-life phenomena in the subjects of physics and engineering which are governed by highly nonlinear Partial differential equations (PDEs) with unknown analytical solutions. More precisely, the (PDEs) arise in a wide variety of physical problems such as; by way of example not exhaustive enumeration, fluid dynamics, engineering mathematics, electrostatics, plasma physics, solid mechanics, chemistry, quantum field theory, bio-mathematics, etc. Therefore, such (PDEs) have received a huge attention from mathematicians, physicists, and engineers for the sake of approximating their analytical solutions.

We aimed in this special issue to publish articles focusing on recent advanced numerical studies on Differential Equations related to physics and engineering. The well-developed analysis of existing numerical algorithms in terms of efficiency, applicability, convergence, stability and accuracy is of importance. A discussion of nontrivial numerical examples is encouraged.

Guest Editors

Thabet Abdeljawad
Qasem M. Al-Mdallal

Email addresses: tAbdeljawad@psu.edu.sa (Thabet Abdeljawad), q.almdallal@uaeu.ac.ae (Qasem M. Al-Mdallal), z.hammoch@fste.umi.ac.ma (Zakia Hammouch), fahd@cankaya.edu.tr (Fahd Jarad)

Received September 02, 2020, Accepted: October 12, 2020, Online: October 14, 2020.

Zakia Hammouch
Fahd Jarad

Acknowledgments

We would like to express our deepest gratitude to many authors and reviewers who contributed so greatly to the success of this special issue. In addition, we would also like to convey our appreciation to the editorial board members of this journal, for their kind assistance and support throughout the reviewing process and the preparation of this special issue.