INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION

EDITOR-IN-CHIEF
Prof. Björn Birnir,
Santa Barbara, CA

ASSOCIATE EDITORS
Ana Carpio, Madrid
Rudi Weikard, Birmingham, AL
Dieter Armbruster, Tempe, AZ
Jan Awrejcewicz, Lodz
Hakima Bessaih, Laramie, WY
Xi Chen, Lubbock, TX
Elżbieta Jarzębowska, Warsaw
J. A. Tenreiro Machado, Porto
Antonio Marzocchella, Naples
Tobias Schäfer, New York, NY
Yuri Sobral, Brasília
Knut Solna, Irvine, CA

DE GRUYTER

ABSTRACTED/INDEXED IN Chemical Abstracts, Scopus, Current Contents, SciSearch.

The publisher, together with the authors and editors, has taken great pains to ensure that all information presented in this work (programs, applications, amounts, dosages, etc.) reflects the standard of knowledge at the time of publication. Despite careful manuscript preparation and proof correction, errors can nevertheless occur. Authors, editors and publisher disclaim all responsibility for any errors or omissions or liability for the results obtained from use of the information, or parts thereof, contained in this work.
The citation of registered names, trade names, trademarks, etc. in this work does not imply, even in the absence of a specific statement, that such names are exempt from laws and regulations protecting trademarks etc. and therefore free for general use.

ISSN 1565-1339 · e-ISSN 2191-0294

All information regarding notes for contributors, subscriptions, open access, back volumes and orders is available online at www.degruyter.com/ijnsns.

RESPONSIBLE EDITOR
Prof. Björn Birnir, Department of Mathematics, University of California, Santa Barbara, CA 93106, USA,
Email: birnir@math.ucsb.edu

JOURNAL MANAGER Esther Markus, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany,
Tel.: +49 (0)30 260 05 – 127, Fax: +49 (0)30 260 05 – 250, Email: esther.markus@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Claudia Neumann, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany,
Tel.: +49 (0)30 260 05 – 226, Fax: +49 (0)30 260 05 – 264, Email: anzeigen@degruyter.com

© 2018 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Integra Software Services Pvt. Ltd., Pondicherry, India

PRINTING Franz X. Stückle Druck und Verlag e. K., Ettenheim

Contents

Pan Wang, Bing Li and Yongkun Yi
Asymptotic Behavior of a Stochastic Two-Species Competition System with Impulsive Effects —— 427

Yong Wang and Xiangyi Yi
Flow Modeling of Well Test Analysis for a Multiple-fractured Horizontal Well in Triple Media Carbonate Reservoir —— 439

Farhoud Kalateh and Ali Koosheh
Finite Element Analysis of Flexible Structure and Cavitating Nonlinear Acoustic Fluid Interaction under Shock Wave Loading —— 459

H. R. Goudarzi
On the Uniqueness of p-Best Approximation in Probabilistic Normed Spaces —— 475

Haide Gou and Baolin Li
Existence of Mild Solutions for Sobolev-Type Hilfer Fractional Nonautonomous Evolution Equations with Delay —— 481

Ramiz Tapdigoglu and Berikbol T. Torebek
On a Non-linear Boundary-Layer Problem for the Fractional Blasius-Type Equation —— 493

D. Marshiana and P. Thirusakthimurugan
Measurement and Control of Non-Linear Data Using ARMA Based Artificial Neural Network —— 499

Zuomao Yan and Xiumei Jia
Pseudo Almost Periodicity and Its Applications to Impulsive Nonautonomous Partial Functional Stochastic Evolution Equations —— 511

Tao Zhou, Xia Liu and Haiping Shi
Existence of Solutions to Boundary Value Problems for a Class of Nonlinear Difference Systems —— 531

Lianwu Yang
Existence and Multiple Solutions for Higher Order Difference Dirichlet Boundary Value Problems —— 539

Jiao Wang and Xihua Chu
Compressive Wave Propagation in Highly Ordered Granular Media Based on DEM —— 545

JinRong Wang, Akbar Zada and Wajid Ali
Ulam's-Type Stability of First-Order Impulsive Differential Equations with Variable Delay in Quasi–Banach Spaces —— 553