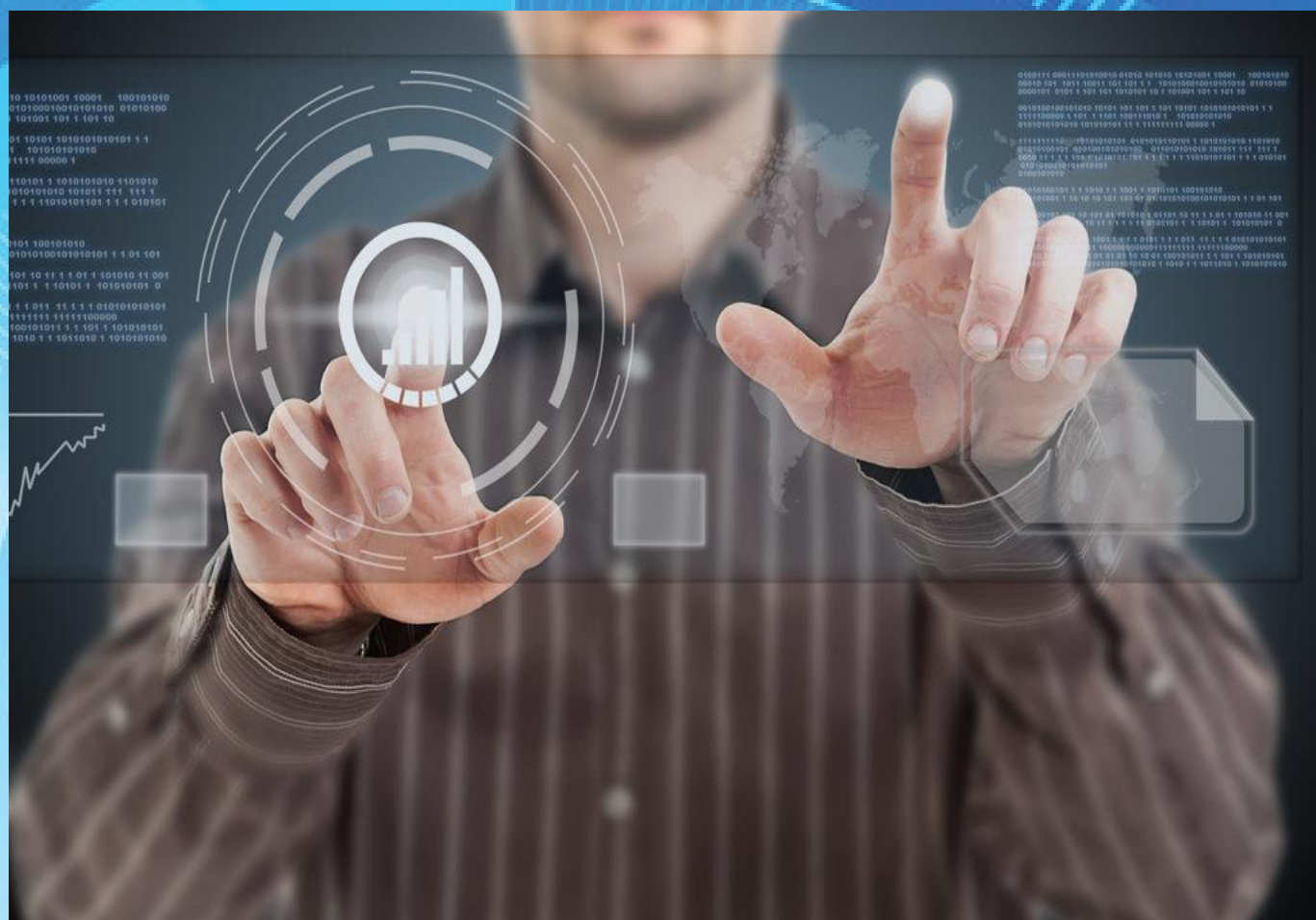


ISSN: 2152-7385 Volume 7, Number 9, May 2016



Applied Mathematics



ISSN: 2152-7385



www.scirp.org/journal/am

Journal Editorial Board

ISSN Print: 2152-7385

ISSN Online: 2152-7393

<http://www.scirp.org/journal/am>

Editor-in-Chief

Prof. Chris Cannings

University of Sheffield, UK

Editorial Board

Prof. Tamer Basar

University of Illinois at Urbana-Champaign, USA

Prof. Leva A. Beklaryan

Russian Academy of Sciences, Russia

Dr. Aziz Belmiloudi

Institut National des Sciences Appliquees de Rennes, France

Dr. Anjan Biswas

Delaware State University, USA

Prof. Mark Broom

City University, UK

Prof. Amares Chattopadhyay

Indian School of Mines, India

Prof. Badong Chen

Xi'an Jiaotong University, China

Prof. Ljubomir Ciric

University of Belgrade, Serbia

Prof. Jose Alberto Cuminato

University of Sao Paulo, Spain

Prof. Konstantin Dyakonov

University of Barcelona, Spain

Prof. Anwar H. Joarder

University of Liberals Arts Bangladesh (ULAB), Bangladesh

Prof. Palle Jorgensen

University of Iowa, USA

Dr. Vladimir A. Kuznetsov

Bioinformatics Institute, Singapore

Prof. Kil Hyun Kwon

Korea Advanced Institute of Science and Technology, South Korea

Prof. Hong-Jian Lai

West Virginia University, USA

Dr. Goran Lesaja

Georgia Southern University, USA

Prof. Tao Luo

Georgetown University, USA

Prof. Addolorata Marasco

University of Naples Federico II, Italy

Prof. María A. Navascués

University of Zaragoza, Spain

Dr. Donatus C. D. Oguamanam

Ryerson University, Canada

Prof. Anatolij Prykarpatski

AGH University of Science and Technology, Poland

Prof. Alexander S. Rabinowitch

Moscow State University, Russia

Prof. Mohammad Mehdi Rashidi

Tongji University, China

Prof. Yuriy V. Rogovchenko

University of Agder, Norway

Prof. Ram Shanmugam

Texas State University, USA

Dr. Epaminondas Sidiropoulos

Aristotle University of Thessaloniki, Greece

Prof. Sergei Silvestrov

Mälardalen University, Sweden

Prof. Hari M. Srivastava

University of Victoria, Canada

Prof. Jacob Sturm

Rutgers University, USA

Prof. Mikhail Sumin

Nizhnii Novgorod State University, Russia

Table of Contents

Volume 7 Number 9

May 2016

The Relationship of Sodium and Potassium Conductances with Dynamic States of a Mathematical Model of Electrosensory Pyramidal Neurons	
T. Shirahata.....	819
The Mean Difference for Lognormal Distribution	
G. Girone, F. Manca.....	824
Petri Nets—A Versatile Modeling Structure	
M. Barad.....	829
A New Approach for Solving Boundary Value Problem in Partial Differential Equation Arising in Financial Market	
F. S. Emmanuel, E. H. Oluyemisi.....	840
The Game-Theoretical Model of Using Insecticide-Treated Bed-Nets to Fight Malaria	
M. Broom, J. Rychtář, T. Spears-Gill.....	852
Dynamics of a Pituitary Cell Model: Dependence on Long-Lasting External Stimulation and Potassium Conductance Kinetics	
T. Shirahata.....	861
Regular Elements of $B_X(D)$ Defined by the Class $\Sigma_1(X,10) - I$	
Y. Diasamidze, N. Tsinaridze, N. Aydn, A. Erdoğan.....	867
Regular Elements of $B_X(D)$ Defined by the Class $\Sigma_1(X,10) - II$	
Y. Diasamidze, N. Tsinaridze, N. Aydn, A. Erdoğan.....	894
Study of the Influence of Nanoparticles on the Molecular Model of an Ideal Fluid	
M. A. Ramazanov, M. S. Aslanov.....	908
The Limitations of Polygenic Hypothesis and Theorizing about Dual Multiple Factors and Three Normal Distributions	
T. Z. Zhang, X. M. Jia, Z. Xu.....	912
The Matching Equivalence Graphs with the Maximum Matching Root Less than or Equal to 2	
H. C. Ma, Y. K. Li.....	920
The Lanczos-Chebyshev Pseudospectral Method for Solution of Differential Equations	
P. Y. P. Chen.....	927

Generalization of Uniqueness of Meromorphic Functions Sharing Fixed Point

H. P. Waghmare, S. Anand.....939

Idempotent Elements of the Semigroups $B_X(D)$ Defined by Semilattices of the Class $\Sigma_3(X, 8)$ When $Z_7 = \emptyset$

G. Tavdgiridze, Ya. Diasamidze, O. Givradze.....953

Proximal Methods for Elliptic Optimal Control Problems with Sparsity Cost Functional

A. Schindele, A. Borzi.....967

Homotopy Analysis Solution to Radial Diffusivity Equation of Slightly Compressible Fluid

O. A. Falode, V. S. Chukwunagolu.....993

1-Way Multihead Quantum Finite State Automata

D. Ganguly, K. Chatterjee, K. S. Ray.....1005

Applied Mathematics (AM)

Journal Information

SUBSCRIPTIONS

The *Applied Mathematics* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$89 per copy.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:

Copyright © 2016 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:

Copyright © 2016 by author(s) and Scientific Research Publishing Inc.

REUSE RIGHTS FOR INDIVIDUAL PAPERS:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

DISCLAIMER OF LIABILITY

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: am@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific
Research
Publishing**

Website: <http://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org