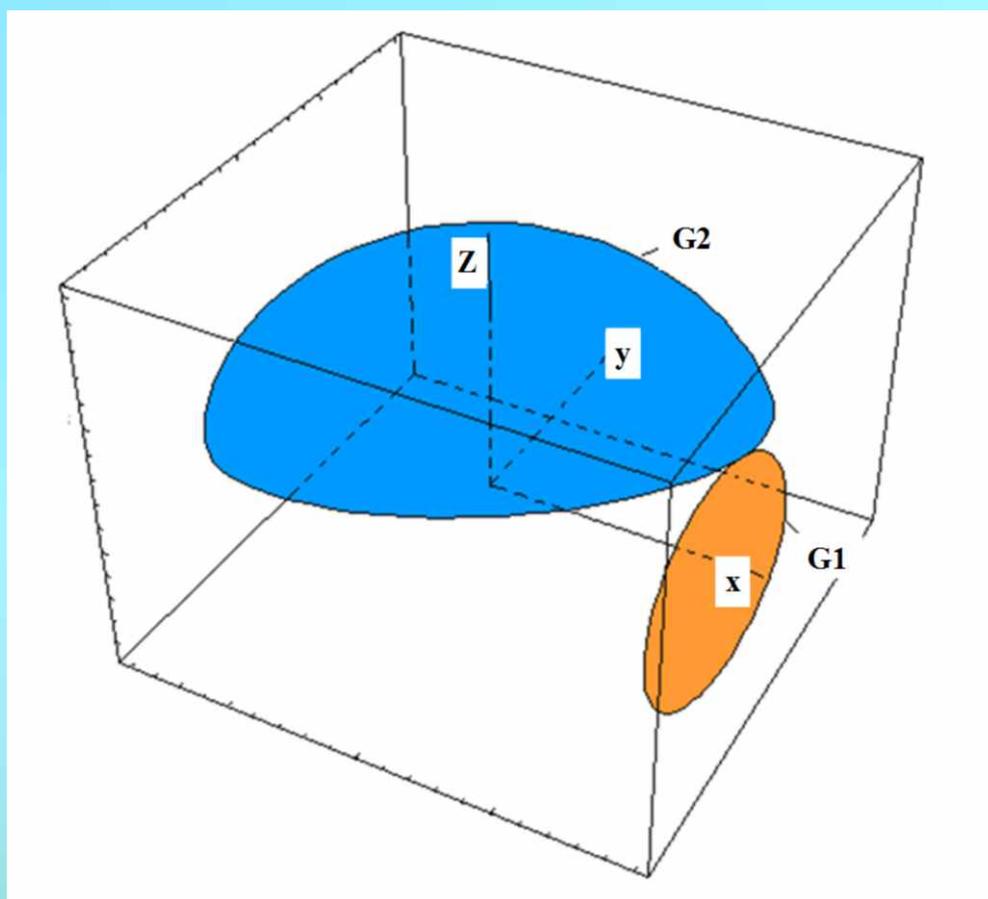


# Applied Mathematics



ISSN: 2152-7385



# 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 Başar**

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 6 Number 10

September 2015

<b>The Dynamic Properties of a Deterministic SIR Epidemic Model in Discrete-Time</b> X. D. Liao, H. B. Wang, X. H. Huang, W. B. Zeng, X. L. Zhou.....	1665
<b>Algorithm for Fast Calculation of Hirzebruch-Jung Continued Fraction Expansions to Coding of Graph Manifolds</b> F. I. B. López, V. N. Efremov, A. M. H. Magdaleno.....	1676
<b>Tooth Surface Design for Variable Transmission Ratio Bevel Gearing</b> N. Yang, D. W. Zhang, Y. L. Tian.....	1685
<b>Epidemiological Model and Public Health Sensitization in Mali</b> M. Alassane.....	1696
<b>An Implicit Smooth Conjugate Projection Gradient Algorithm for Optimization with Nonlinear Complementarity Constraints</b> C. Zhang, L. M. Sun, Z. B. Zhu, M. L. Fang.....	1712
<b>Supply Chain Commitment Contract Model Based on Uncertainty Theory under Uncertain Market Information</b> Y. Q. Cui, X. L. Zhang, X. Lu.....	1727
<b>Experimental Design for Optimizing a Mixture of Materials plus an Evaporating Solvent</b> M. Fernandj, D. Decastri, M. Bazzurri, S. Clementi.....	1740
<b>Movement of Self-Organizing Solitons in Ferromagnet</b> V. V. Nietz.....	1747
<b>Itô Formula for Integral Processes Related to Space-Time Lévy Noise</b> R. M. Balan, C. B. Ndongo.....	1755
<b>On Stability of Nonlinear Differential System via Cone-Perturbing Liapunov Function Method</b> A. A. Soliman, W. F. Seyam.....	1769
<b>Stability Analysis of a Delayed HIV/AIDS Epidemic Model with Treatment and Vertical Transmission</b> Z. Osman, X. Abdurahman.....	1781
<b>Random Attractors for Stochastic Reaction-Diffusion Equations with Distribution Derivatives on Unbounded Domains</b> E. M. Ahmed, A. D. Abdelmajid, L. Xu, Q. Z. Ma.....	1790

## **Applied Mathematics (AM)**

### **Journal Information**

#### **SUBSCRIPTIONS**

The *Applied Mathematics* (Online at Scientific Research Publishing, [www.SciRP.org](http://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](mailto:sub@scirp.org)

#### **SERVICES**

##### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

##### **Reprints (minimum quantity 100 copies)**

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

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

#### **COPYRIGHT**

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

Copyright © 2015 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 © 2015 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](mailto:am@scirp.org)