

# **Applied Mathematics**





www.scirp.org/journal/am

# **Journal Editorial Board**

ISSN 2152-7385 (Print) ISSN 2152-7393 (Online) http://www.scirp.org/journal/am

# Editor-in-Chief

**Prof. Chris Cannings** 

University of Sheffield, UK

## Editorial Board (According to Alphabet)

Prof. Leva A. Beklaryan	Russian Academy of Sciences, Russia
Dr. Aziz Belmiloudi	Institut National des Sciences Appliquees de Rennes, France
Prof. Mark Broom	City University, UK
Prof. Amares Chattopadhyay	Indian School of Mines, India
Dr. Badong Chen	Tsinghua University, China
Prof. Jose Alberto Cuminato	University of Sao Paulo, Spain
Prof. Konstantin Dyakonov	University of Barcelona, Spain
Dr. David Greenhalgh	University of Strathclyde, UK
Prof. Zhiqing Han	Dalian University of Technology, China
Prof. Yurii G. Ignatyev	Kazan State University, Russia
Prof. Palle Jorgensen	University of Iowa, USA
Prof. Kil Hyun Kwon	Korea Advanced Institute of Science and Technology, Korea (South)
Prof. Hong-Jian Lai	West Virginia University, USA
Dr. Goran Lesaja	Georgia Southern University, USA
Prof. Tao Luo	Georgetown University, USA
Prof. Agassi Melikov	National Aviation Academy, Azerbaijan
Prof. María A. Navascués	University of Zaragoza, Spain
Dr. Donatus C. D. Oguamanam	Ryerson University, Canada
Prof. Kanishka Perera	Florida Institute of Technology, USA
Prof. Alexander S. Rabinowitch	Moscow State University, Russia
Dr. Epaminondas Sidiropoulos	Aristotle University of Thessaloniki, Greece
Dr. Sergei Silvestrov	Lund University, Sweden
Prof. Jacob Sturm	Rutgers University, USA
Dr. Zheng Su	Genentech Inc., USA
Prof. Mikhail Sumin	Nizhnii Novgorod State University, Russia
Dr. Feridun Turkman	University of Lisbon, Portugal
Dr. Chengbo Wang	Johns Hopkins University, USA
Dr. Hua Zhang	University of Rochester, USA
Dr. Yi-Rong Zhu	Research Scientist at Elder Research, Inc., USA
Editorial Assistant	

Tian Huang

Scientific Research Publishing, USA

**Guest Reviewer** 

Anil Kumar



## TABLE OF CONTENTS

#### Volume 2 Number 2 February 2011 **G-Type Seismic Wave in Magnetoelastic Monoclinic Layer** Formulation of the Post-Newtonian Equations of Motion of the Restricted Three Body Problem **Reservoir Multiscale Data Assimilation Using the Ensemble Kalman Filter** Hyperbolic Fibonacci and Lucas Functions, "Golden" Fibonacci Goniometry, Bodnar's Geometry, and Hilbert's Fourth Problem On the Distribution of Type II Errors in Hypothesis Testing Wavelet Bases Made of Piecewise Polynomial Functions: Theory and Applications Alienor Method for Nonlinear Multi-Objective Optimization Complementing the Lagrangian Density of the E. M. Field and the Surface Integral of the p-v Vector Product **Uniqueness of Meromorphic Functions Concerning Differential Monomials** Improving AOR Method for a Class of Two-by-Two Linear Systems Mathematical Modeling of Diffusion Phenomenon in a Moderately Constricted Geometry Matrix Padé-Type Method for Computing the Matrix Exponential **Generalized Abel Inversion Using Homotopy Perturbation Method** The First Integral Method for Solving Maccari's System Mathematical Model of Blood Flow in Small Blood Vessel in the Presence of Magnetic Field

The figure on the front is from the article published in Applied Mathematics, 2010, Vol. 2, No. 2, pp. 181-188 by Alexey Stakhov and Samuil Aranson.

#### **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: \$50 per issue. 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©2011 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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 assumes 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





# **Applied Mathematics (AM)**

# ISSN 2152-7385 (Print) ISSN 2152-7393 (Online) http://www.scirp.org/journal/am

Applied Mathematics (AM) is an international journal dedicated to the latest advancement of applied mathematics. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas.

# Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

- Applied Probability
- Applied Statistics
- Approximation Theory
- Chaos Theory
- Combinatorics
- Complexity Theory
- Computability Theory
- Computational Methods in Mechanics and Physics Mathematical Biology
- Continuum Mechanics
- Control Theory
- Cryptography
- Discrete Geometry
- Dynamical Systems
- Elastodynamics

- Evolutionary Computation
- Financial Mathematics
- Fuzzy Logic
- Game Theory
- Graph Theory
- Information Theory

- Mathematical Chemistry
- Mathematical Economics
- Mathematical Physics
- Mathematical Psychology
- Mathematical Sociology
- Matrix Computations

- Neural Networks
- Nonlinear Processes in Physics
- Numerical Analysis
- Operations Research

Call for Papers

- Optimal Control
- Optimization
- Ordinary Differential Equations
- Partial Differential Equations
- Probability Theory
- Statistical Finance
- Stochastic Processes
- Theoretical Statistics

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of **Applied** Mathematics.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail http://www.scirp.org/journal/am

E-mail: am@scirp.org

• Inverse Problems