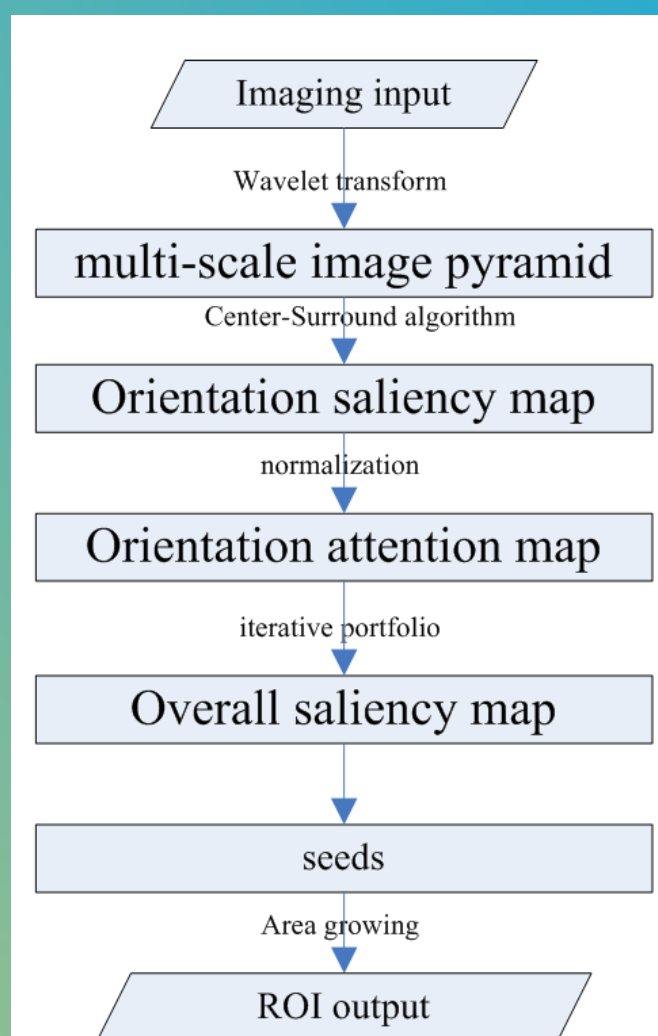


# Journal of Applied Mathematics and Physics



ISSN: 2327-4352



# JOURNAL EDITORIAL BOARD

ISSN 2327-4352 (Print) ISSN 2327-4379 (Online)

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

---

## Editor-in-Chief

**Prof. Wen-Xiu Ma**

University of South Florida, USA

## Editorial Board (According to Alphabet)

<b>Dr. Izhar Ahmad</b>	King Fahd University of Petroleum and Minerals, Saudi Arabia
<b>Dr. S. Joseph Antony</b>	University of Leeds, UK
<b>Prof. Roberto Oscar Aquilano</b>	Instituto de Física Rosario, Argentina
<b>Prof. Ping-Hei Chen</b>	National Taiwan University, Chinese Taipei
<b>Prof. Wanyang Dai</b>	Nanjing University, China
<b>Dr. Steven B. Damelin</b>	The American Mathematical Society, USA
<b>Prof. Beih El-Sayed El-Desouky</b>	Mansoura University, Egypt
<b>Prof. Chaudry Masood Khalique</b>	North-West University, South Africa
<b>Dr. Ki Young Kim</b>	Samsung Advanced Institute of Technology, South Korea
<b>Prof. Xiang Li</b>	Beijing University of Chemical Technology, China
<b>Dr. Jafar Fawzi Mansi AlOmari</b>	Al-Balqa' Applied University, Jordan
<b>Prof. Rosa Pardo</b>	Complutense University of Madrid, Spain
<b>Prof. Sanzheng Qiao</b>	McMaster University, Canada
<b>Dr. Daniele Ritelli</b>	University of Bologna, Italy
<b>Dr. Babak Daneshvar Rouyendegh</b>	Atilim University, Turkey
<b>Prof. Morteza Seddighin</b>	Indiana University East, USA
<b>Dr. Marco Spadini</b>	University of Florence, Italy
<b>Dr. Divine Tito Fongha Wanduku</b>	Keiser University, USA
<b>Prof. Ping Wang</b>	Penn State University Schuylkill, USA
<b>Prof. Xiaohui Yuan</b>	Huazhong University of Science and Technology, China

# Table of Contents

Volume 3    Number 7

July 2015

## **An Algorithm for Medical Imaging Compression That Is Oriented to ROI-Characteristics Protection**

R. J. Shuai, Y. Shen, J. Pan.....854

## **New Algorithms for Solving Bordered $k$ -Tridiagonal Linear Systems**

M. El-Mikkawy, F. Atlan.....862

## **Von Neumann's Theory, Projective Measurement, and Quantum Computation**

K. Nagata, T. Nakamura.....874

## **Analysis of Bell-Type Experiments and Its Local Realism**

K. Nagata, T. Nakamura.....898

## **On a System of Second-Order Nonlinear Difference Equations**

H. M. Bao.....903

## **Reliability Analysis of a Redundant Cascade System by Using Markovian Approach**

N. Swathi, T. S. Uma Maheswari.....911

## **Unsteady Magnetohydrodynamic Boundary Layer Flow near the Stagnation Point towards a Shrinking Surface**

S. Chaudhary, P. Kumar.....921

# **Journal of Applied Mathematics and Physics (JAMP)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Journal of Applied Mathematics and Physics* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published monthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$39 per issue.

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.

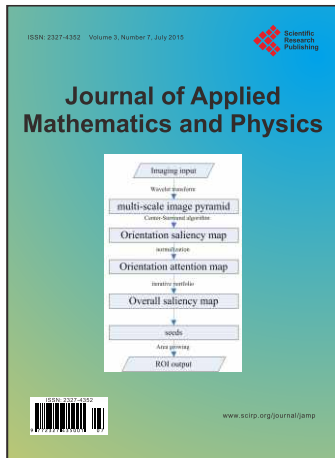
#### **DISCLAIMER OF LIABILITY**

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: [jamp@scirp.org](mailto:jamp@scirp.org)



# Journal of Applied Mathematics and Physics

ISSN Print: 2327-4352 ISSN Online: 2327-4379  
<http://www.scirp.org/journal/jamp>

Journal of Applied Mathematics and Physics is an international journal dedicated to the latest advancement of applied mathematics and physics. The goal of this journal is to provide a platform for researchers and scientists all over the world to promote, share, and discuss various new issues and developments in different areas of applied mathematics and physics. We aim to publish high quality research articles in terms of originality, depth and relevance of content, and particularly welcome contributions of interdisciplinary research on applied mathematics, physics and engineering.

## Subject Coverage

The journal publishes original papers including but not limited to the following fields:

- Applications of Systems
- Applied Mathematics
- Applied Non-Linear Physics
- Applied Optics
- Applied Solid State Physics
- Biophysics
- Computational Physics
- Condensed Matter Physics
- Control Theory
- Cryptography
- Differentiable Dynamical Systems
- Engineering and Industrial Physics
- Experimental Mathematics
- Fluid Mechanics
- Fuzzy Optimization
- Geophysics
- Integrable Systems
- Laser Physics
- Methodological Advances
- Multi-Objective Optimization
- Nanoscale Physics
- Nonlinear Partial Differential Equations
- Non-Linear Physics
- Nuclear Physics
- Numerical Computation
- Optical Physics
- Portfolio Selection
- Riemannian Manifolds
- Scientific Computing
- Set-Valued Analysis
- Soliton Theory
- Space Physics
- Symbolic Computation
- Topological Dynamic Systems
- Variational Inequality
- Vector Optimization

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

## Notes for Intending Authors

The journal publishes the highest quality original full articles, communications, notes, reviews, special issues and books, covering both the experimental and theoretical aspects including but not limited to the above materials, techniques and studies. Papers are acceptable provided they report important findings, novel insights or useful techniques within the scope of the journal. All manuscript must be prepared in English, and are subjected to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by prints in hard copy.

## Website and E-Mail

<http://www.scirp.org/journal/jamp> E-mail: [jamp@scirp.org](mailto:jamp@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](mailto:sub@scirp.org)**

**Advertisement: [service@scirp.org](mailto:service@scirp.org)**