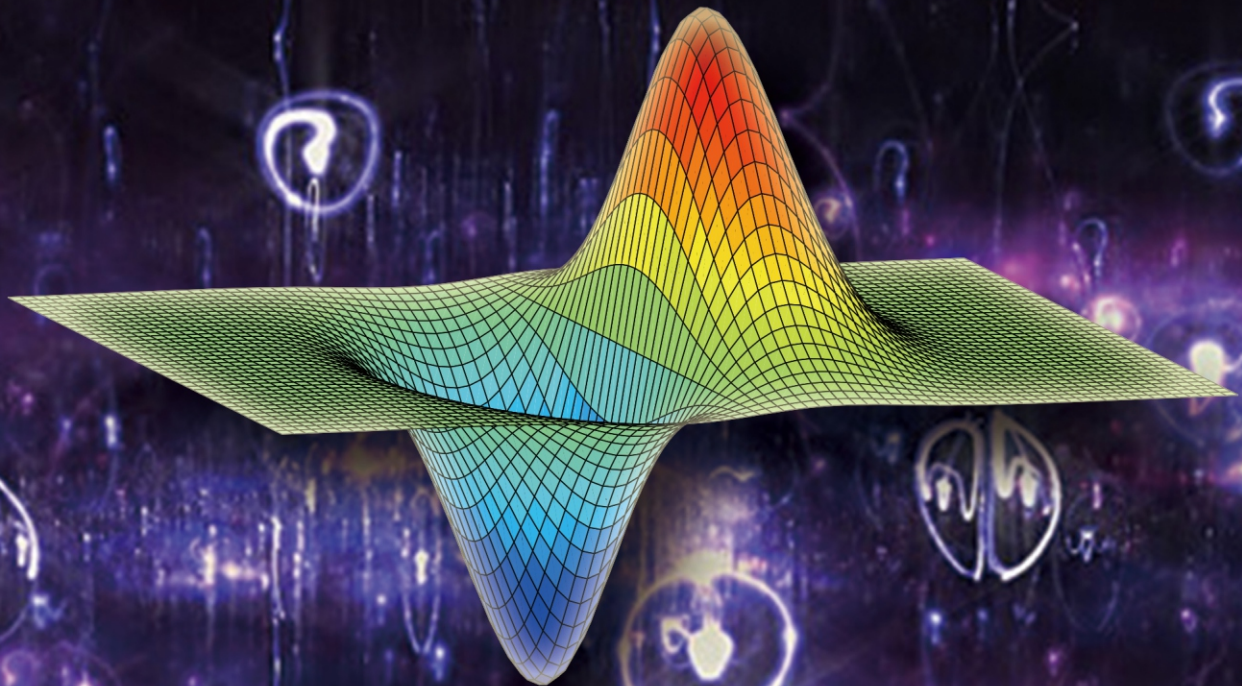


ISSN: 2160-0368 Volume 8, Number 5, May 2018



Advances in Pure Mathematics



ISSN: 2160-0368



www.scirp.org/journal/apm

Journal Editorial Board

ISSN 2160-0368 (Print) ISSN 2160-0384 (Online)

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

Editor-in-Chief

Prof. Dexing Kong

Zhejiang University, China

Editorial Board

Dr. Taher S. H. Abdelmonem

Mansoura University, Egypt

Dr. Adel Ahmed Attiya

Mansoura University, Egypt

Prof. Józef Banas

Bronislaw Markiewicz State School of Higher Vocational Education in Jaroslaw, Poland

Prof. Constantin Buse

West University of Timisoara, Romania

Dr. Claudio Cuevas

Federal University of Pernambuco, Brazil

Prof. Leo Depuydt

Brown University, USA

Prof. Dragan S. Djordjevic

University of Nis, Serbia

Dr. Ozgur EGE

Celal Bayar University, Turkey

Prof. Ahmed M. A. El-Sayed

Alexandria University, Egypt

Prof. Marisa Fernandez

Universidad del País Vasco, Spain

Prof. Cristescu Gabriela

Aurel Vlaicu University of Arad, Romania

Prof. Hongya Gao

Hebei University, China

Prof. Aleksander Grytczuk

University of Zielona Góra and Jan Pawel II Western, Poland

Prof. Yuxia Guo

Tsinghua University, China

Dr. Sevdzhan Hakkaev

University of Kansas, USA

Dr. Chengchun Hao

Chinese Academy of Sciences, China

Prof. Tianxiao He

Illinois Wesleyan University, USA

Prof. Wei He

Nanjing Normal University, China

Prof. Tingzhu Huang

University of Electronic Science & Technology of China, China

Prof. Toshitake Kohno

The University of Tokyo, Japan

Prof. Vichian Laohakosol

Kasetsart University, Thailand

Dr. Jingjing Ma

University of Houston-Clear Lake, USA

Prof. Elimhan N. Mahmudov

Istanbul Technical University, Turkey

Dr. Lucia Marino

Catania University, Italy

Prof. Ming Mei

McGill University, Canada

Dr. M. T. Mustafa

Qatar University, Qatar

Dr. Marek Niezgod

University of Life Sciences in Lublin, Poland

Dr. Mahammad A. Nurmammadov

Azerbaijan State Pedagogical University, Azerbaijan

Prof. Jyotindra C. Prajapati

Charotar University of Science and Technology, India

Dr. Marius Rădulescu

Institute of Mathematical Statistics and Applied Mathematics “Gheorghe Mihoc-Caius Iacob” of the Romanian Academy, Romania

Prof. Jingli Ren

Zhengzhou University, China

Prof. Bayram Sahin

Inonu University, Turkey

Prof. Samir H. Saker

Mansoura University, Egypt

Dr. Bessem Samet

Tunis College of Sciences and Techniques, Tunisia

Dr. Yongli Song

Tongji University, China

Prof. Hari M. Srivastava

University of Victoria, Canada

Prof. Yeong-Jeu Sun

I-Shou University, Chinese Taipei

Dr. Néstor Thome

Universitat Politècnica de València, Spain

Prof. Aydin Tiryaki

Izmir University, Turkey

Prof. Gabor Toth

Rutgers University, USA

Prof. Amitabha Tripathi

Indian Institute of Technology, India

Prof. Nodari Vakhania

Georgian Academy of Sciences, Mexico

Prof. Qingwen Wang

Shanghai University, China

Dr. Yanjin Wang

Institute of Applied Physics and Computational Mathematics, China

Prof. Changjin Xu

Guizhou Key Laboratory of Economics System Simulation, China

Dr. Jasang Yoon

University of Texas Rio Grande Valley, USA

Prof. Mohamed F. Yousif

The Ohio State University, USA

Dr. Shijun Zheng

Georgia Southern University, USA

Prof. Changjiang Zhu

South China University of Technology, China

Table of Contents

Volume 8 Number 5

May 2018

Existence and Stability Property of Almost Periodic Solutions in Discrete Almost Periodic Systems

Y. Hamaya.....463

Least Squares Method from the View Point of Deep Learning

K. Fujii.....485

T_3 Tree and Its Traits in Understanding Integers

X. B. Wang.....494

The Unitary Group in Its Strong Topology

M. Schottenloher.....508

Stability Analysis and Stochastic SI Modelling of Endemic Diseases

D. P. Kelkile.....516

Advances in Pure Mathematics (APM)

Journal Information

SUBSCRIPTIONS

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

Subscription rates:

Print: \$79 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 and reuse rights for the front matter of the journal:

Copyright © 2018 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 © 2018 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.

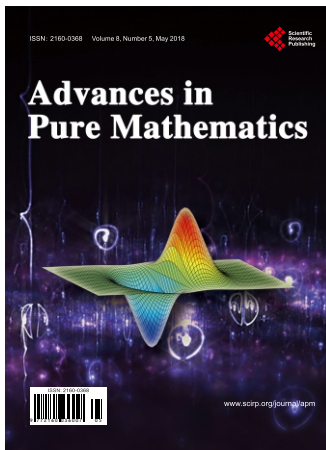
Disclaimer of liability

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: apm@scirp.org



Call for Papers

Advances in Pure Mathematics (APM)

ISSN 2160-0368 (Print) ISSN 2160-0384 (Online)
<http://www.scirp.org/journal/apm>

Advances in Pure Mathematics (APM) is an international journal dedicated to the latest advancements in ordered algebraic structures. 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 of ordered algebraic structures.

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 Harmonic Analysis
- Approximation Theory
- Asymptotic Methods
- Bifurcation Theory
- Coding Theory
- Combinatorics
- Complex Analysis
- Convex Analysis
- Difference Equations
- Differential Equations
- Dynamical Systems
- Fixed-Point Theory
- Fourier Analysis
- Fractals
- Fractional Analysis
- Functional Differential Equations
- Fuzzy Mathematics
- Geometry
- Geometry of Banach Spaces
- Integral Equations
- Mathematical Biology, including Population Dynamics
- Mathematical Physics
- Matrix Theory
- Moment Theory
- Number Theory
- Numerical Analysis
- Operator Theory
- Optimal Control
- Optimization Wavelets
- Partial Differential Equations
- Probability
- Reaction-Diffusion Problems, Discrete Mathematics
- Scattering Theory
- Semigroups of Operators
- Signal Theory
- Special Functions
- Statistics
- Stochastic Process
- Topology and Applications
- Transport Theory
- Ultrametric Analysis
- Variational Methods

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 the APM.

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/apm> E-mail: apm@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