

ISSN: 2160-0368 Vol.1, No.1, January 2011



Scientific  
Research

# Advances in Pure Mathematics



[www.scirp.org/journal/apm](http://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. Juan de dios Pérez Jiménez**      Universidad de Granada, Spain

## Editorial Board

<b>Dr. Taher Salah Hassan Abdelmonem</b>	Mansoura University, Egypt
<b>Dr. Adel Ahmed Attiya</b>	University of Mansoura, Egypt
<b>Prof. Kamal Bahmanpour</b>	Islamic Azad University-Ardabil Branch, Iran
<b>Prof. Józef Banaś</b>	Bronislaw Markiewicz State School of Higher Vocational Education in Jaroslaw, Poland
<b>Prof. Constantin Buse</b>	West University of Timisoara, Romania
<b>Prof. Sumit Chandok</b>	Punjab Technical University, India
<b>Prof. Muhammad Aslam Chaudhry</b>	King Fahd University of Petroleum and Minerals, Saudi-arabia
<b>Prof. Pantelis A. Damianou</b>	University of Cyprus, Cyprus
<b>Prof. Dragan S. Djordjevic</b>	University of Nis, Serbia
<b>Prof. Ahmed Mohamed Ahmed El-Sayed</b>	Alexandria University, Egypt
<b>Prof. Marisa Fernandez</b>	Universidad del Pais Vasco, Spain
<b>Prof. Cristescu Gabriela</b>	Aurel Vlaicu University of Arad, Romania
<b>Prof. Hong-Ya Gao</b>	Hebei University, China
<b>Prof. Aleksander Grytczuk</b>	University of Zielona Góra and Jan Pawel II Western Higher School of Commerce and International Finance in Zielona Góra, Poland
<b>Prof. Sevdzhan Hakkaev</b>	Faculty of Mathematics and Informatics Shumen University, USA
<b>Prof. Yuxia Guo</b>	Tsinghua University, China
<b>Dr. Chengchun Hao</b>	Chinese Academy of Sciences, China
<b>Prof. Tian-Xiao He</b>	Illinois Wesleyan University, USA
<b>Prof. Wei He</b>	Nanjing Normal University, China
<b>Prof. Ting-Zhu Huang</b>	University of Electronic Science & Technology of China, China
<b>Prof. Shuichi Izumiya</b>	Hokkaido University, Japan
<b>Prof. De-Xing Kong</b>	Zhejiang University, China
<b>Prof. Vichian Laohakosol</b>	Kasetsart University, Thailand
<b>Dr. Jingjing Ma</b>	University of Houston-Clear Lake, USA
<b>Prof. Elimhan N. Mahmudov</b>	Istanbul Technical University, Turkey
<b>Dr. Frantisek Marko</b>	The Pennsylvania State University, USA
<b>Prof. Ming Mei</b>	McGill University, Canada
<b>Prof. Rer. nat. Mara D. Neusel</b>	Texas Tech University, USA
<b>Dr. Marek Niezgoda</b>	University of Life Sciences, Poland
<b>Dr. Jyotindra Chandrasinh Prajapati</b>	Charotar University of Science and Technology, India
<b>Dr. Marius Rădulescu</b>	Gheorghe Mihoc-Caius Iacob, Romania
<b>Prof. Jingli Ren</b>	Zhengzhou University, China
<b>Prof. Bayram Sahin</b>	Inonu University, Turkey
<b>Prof. Samir H. Saker</b>	Mansoura University, Egypt
<b>Prof. Bessem Samet</b>	Tunis College of Sciences and Techniques, Tunisia
<b>Prof. Zhi-Qiang Shao</b>	Fuzhou University, China
<b>Prof. Yongli Song</b>	Tongji University, China
<b>Prof. Yeong-Jeu Sun</b>	I-Shou University, Taiwan (China)
<b>Dr. Néstor Thome</b>	Universidad Politécnica de Valencia, Spain
<b>Prof. Kenan Tas</b>	Cankaya University, Turkey
<b>Prof. Aydin Tiryaki</b>	Izmir University, Turkey
<b>Dr. Amitabha Tripathi</b>	Indian Institute of Technology, India
<b>Prof. Nodari Vakhania</b>	Georgian Academy of Sciences, Mexico
<b>Prof. Mingxin Wang</b>	Harbin Institute of Technology, China
<b>Prof. Qing-Wen Wang</b>	Shanghai University, China
<b>Dr. Yanjin Wang</b>	Institute of Applied Physics and Computational Mathematics, China
<b>Prof. Anthony Ross Weston</b>	Canisius College, USA
<b>Prof. Jie Xiao</b>	Memorial University of Newfoundland, Canada
<b>Dr. Jasang Yoon</b>	The University of Texas-Pan American, USA
<b>Prof. Norio Yoshida</b>	University of Toyama, Japan
<b>Prof. Hong-Kun Zhang</b>	University of Massachusetts, USA
<b>Dr. Shijun Zheng</b>	Georgia Southern University, USA
<b>Prof. Changjiang Zhu</b>	Huazhong Normal University, China

## Editorial Assistant

**Yana Yi**      Scientific Research Publishing, USA

## TABLE OF CONTENTS

**Volume 1    Number 1**

**January 2011**

### **First Note on the Definition of $S_2$ -Convexity**

I. M. R. Pinheiro.....1

### **New Solutions to Nonlinear Ordinary Differential Equations**

M. Alghalith.....3

# **Advances in Pure Mathematics (APM)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Advances in Pure Mathematics* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published bimonthly 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©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.

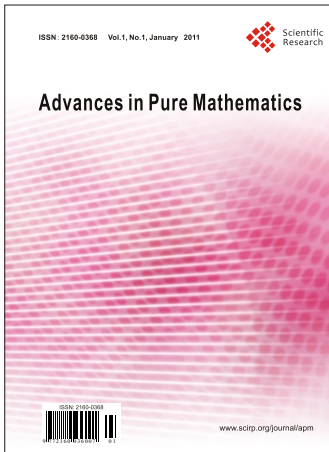
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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 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](mailto:apm@scirp.org)



# 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 advancement of 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 | Fractional Analysis                                 | Partial Differential Equations |
| Approximation Theory      | Functional Differential Equations                   | Probability                    |
| Asymptotic Methods        | Fuzzy Mathematics                                   | Reaction-Diffusion Problems,   |
| Bifurcation Theory        | Geometry of Banach Spaces                           | Discrete Mathematics           |
| Coding Theory             | Integral Equations                                  | Scattering Theory              |
| Combinatorics             | Mathematical Biology, Including Population Dynamics | Semigroups of Operators        |
| Complex Analysis          | Mathematical Physics                                | Signal Theory                  |
| Convex Analysis           | Matrix Theory                                       | Special Functions              |
| Difference Equations      | Moment Theory                                       | Statistics                     |
| Differential Equations    | Number Theory                                       | Stochastic Process             |
| Dynamical Systems         | Numerical Analysis                                  | Topology and Applications      |
| Fixed-Point Theory        | Operator Theory                                     | Transport Theory               |
| Fourier Analysis          | Optimal Control                                     | Ultrametric Analysis           |
| Fractals                  | Optimization; Wavelets                              | 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](mailto:apm@scirp.org)