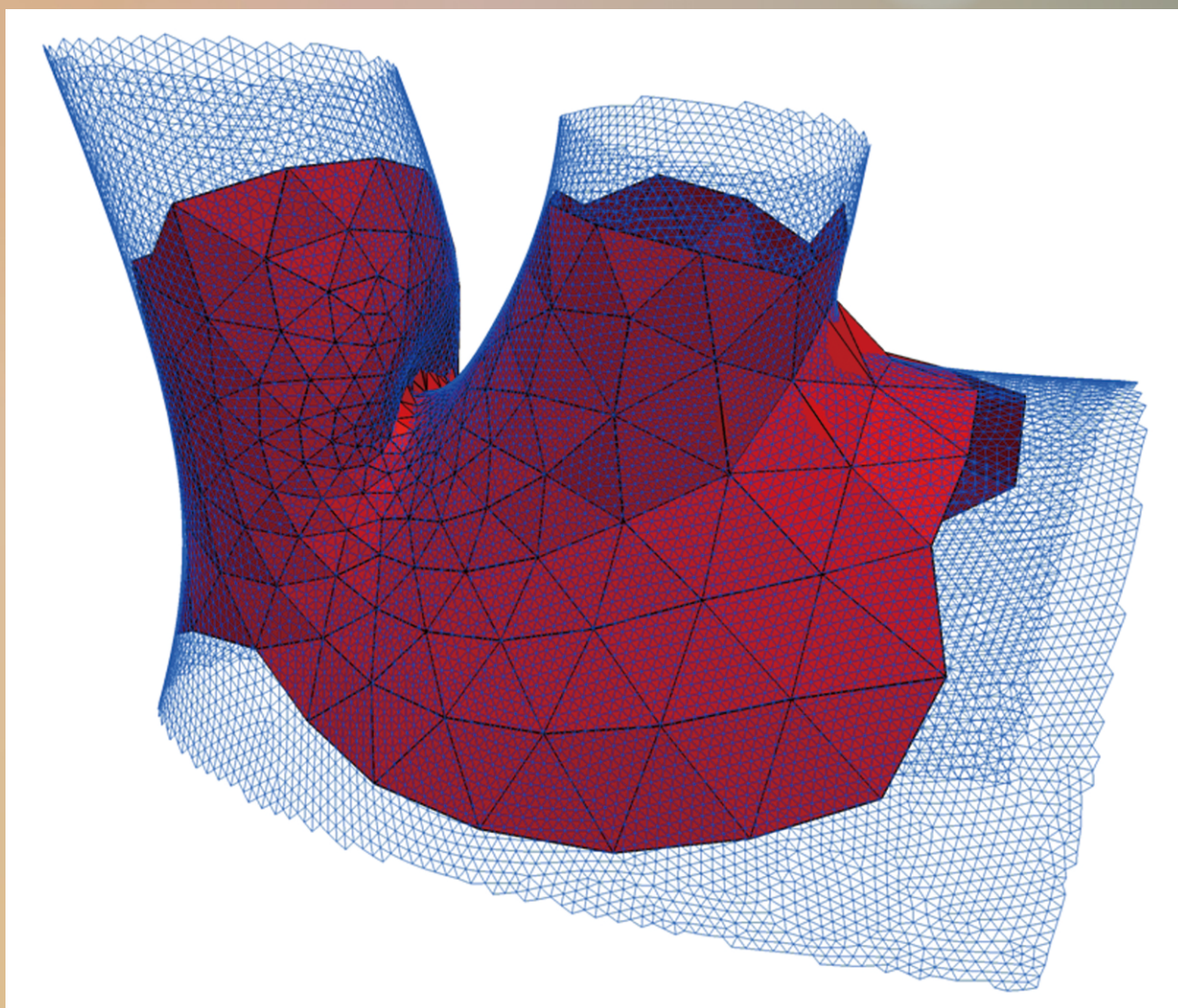


Applied Mathematics



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

Dr. Anwar H. Joarder

Universiti Brunei Darussalam, Brunei

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. Alexander S. Rabinowitch

Moscow State University, Russia

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 5 Number 21

December 2014

Three-Objective Programming with Continuous Variable Genetic Algorithm

A. Fita.....3297

Orbital Properties of Regular Chain

K. G. Zhang, H. X. Du, H. I. Meng, M. T. Ba.....3311

Energy-Minimizing Curve Fitting for High-Order Surface Mesh Generation

K. Bock, J. Stiller.....3318

The Numerical Solution of the MRLW Equation Using the Multigrid Method

Y. M. Abo Essa, I. Abouefarag, E-D. Rahmo.....3328

The Mathematics of Harmony. Proclus' Hypothesis and New View on Euclid's Elements and History of Mathematics Starting since Euclid

A. Stakhov.....3335

A Comparative Study of Adomain Decomposition Method and He-Laplace Method

B. A. A. Adam.....3353

The Stability of Highly Pathogenic Avian Influenza Epidemic Model with Saturated Contact Rate

S. Q. Che, Y. K. Xue, L. K. Ma.....3365

A Computational Quadruple Laplace Transform for the Solution of Partial Differential Equations

H. U. Rehman, M. Iftikhar, S. Saleem, M. Younis, A. Mueed.....3372

ARIMA: An Applied Time Series Forecasting Model for the Bovespa Stock Index

P. Rotela Junior, F. L. R. Salomon, E. de Oliveira Pamplona.....3383

Finding Gaussian Curvature of Lifespan Distribution

W. W. S. Chen.....3392

Complex Matter Space and Relativistic Quantum Mechanics

R. Ahangar.....3401

The Influence Function of the Correlation Indexes in a Two-by-Two Table

G. Girone, F. Manca, C. Marin.....3411

Determining Sufficient Number of Imputations Using Variance of Imputation Variances: Data from 2012 NAMCS Physician Workflow Mail Survey

Q. Y. Pan, R. Wei, I. Shimizu, E. Jamoom.....3421

The Virtual Repeat Sale Model for the House Price Index for New Building in China

W. H. Jin, S. P. Jin.....3431

Fixed Points and Common Fixed Points of Quasi-Contractive Mappings on Partially Ordered-Cone Metric Spaces

H. L. Jin, Y. J. Piao.....3437

On Accelerated Singular Value Thresholding Algorithm for Matrix Completion

L. Wang, J. F. Hu, C. Z. Chen.....3445

Combining Methods of Lyapunov for Exponential Stability of Linear Dynamic Systems on Time Scales

N. N. Huy, D. D. Chau.....3452

Coupled-Nonlinear Elastic Structure: An Innovative Parameterization Scheme of the Motion Equations

S. A. David.....3460

New Oscillation Criteria of Second-Order Nonlinear Delay Dynamic Equations on Time Scales

Q. X. Zhang, L. Gao.....3474

Integral Inequalities of Gronwall-Bellman Type

Z. A. Khan.....3484

Causal Groupoid Symmetries and Big Data

S. Pissanetzky.....3489

A Note on Finding Geodesic Equation of Two Parameters Gamma Distribution

W. W. S. Chen.....3511

Loose Waves in Viscoelastic Cylindrical Wave Guide with Radial Crack

I. I. Safarov, M. Sh. Akhmedov, Z. I. Boltaev.....3518

Duality for a Control Problem Involving Support Functions

I. Husain, A. R. Shah, R. K. Pandey.....3525

Country Contact Tightness Influence Analysis Using Indirect Effects

M. Z. Fang, X. Lu.....3536

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: \$89 per copy.

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 © 2014 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 © 2014 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.

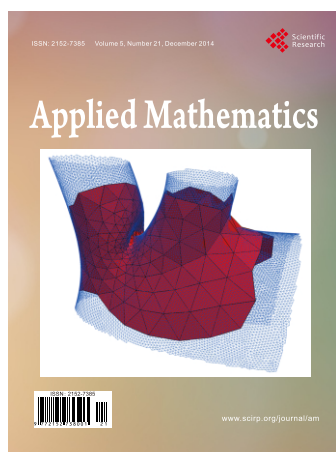
DISCLAIMER OF LIABILITY

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



Call for Papers

Applied Mathematics (AM)

ISSN Print: 2152-7385 ISSN Online: 2152-7393

<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 of applied mathematics.

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- | | | |
|--|----------------------------|-----------------------------------|
| ● Applied Probability | ● Evolutionary Computation | ● Matrix Computations |
| ● Applied Statistics | ● Financial Mathematics | ● Neural Networks |
| ● Approximation Theory | ● Fuzzy Logic | ● Nonlinear Processes in Physics |
| ● Chaos Theory | ● Game Theory | ● Numerical Analysis |
| ● Combinatorics | ● Graph Theory | ● Operations Research |
| ● Complexity Theory | ● Information Theory | ● Optimal Control |
| ● Computability Theory | ● Inverse Problems | ● Optimization |
| ● Computational Methods in Mechanics and Physics | ● Linear Programming | ● Ordinary Differential Equations |
| ● Continuum Mechanics | ● Mathematical Biology | ● Partial Differential Equations |
| ● Control Theory | ● Mathematical Chemistry | ● Probability Theory |
| ● Cryptography | ● Mathematical Economics | ● Statistical Finance |
| ● Discrete Geometry | ● Mathematical Physics | ● Stochastic Processes |
| ● Dynamical Systems | ● Mathematical Psychology | ● Theoretical Statistics |
| ● Elastodynamics | ● Mathematical Sociology | |

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

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