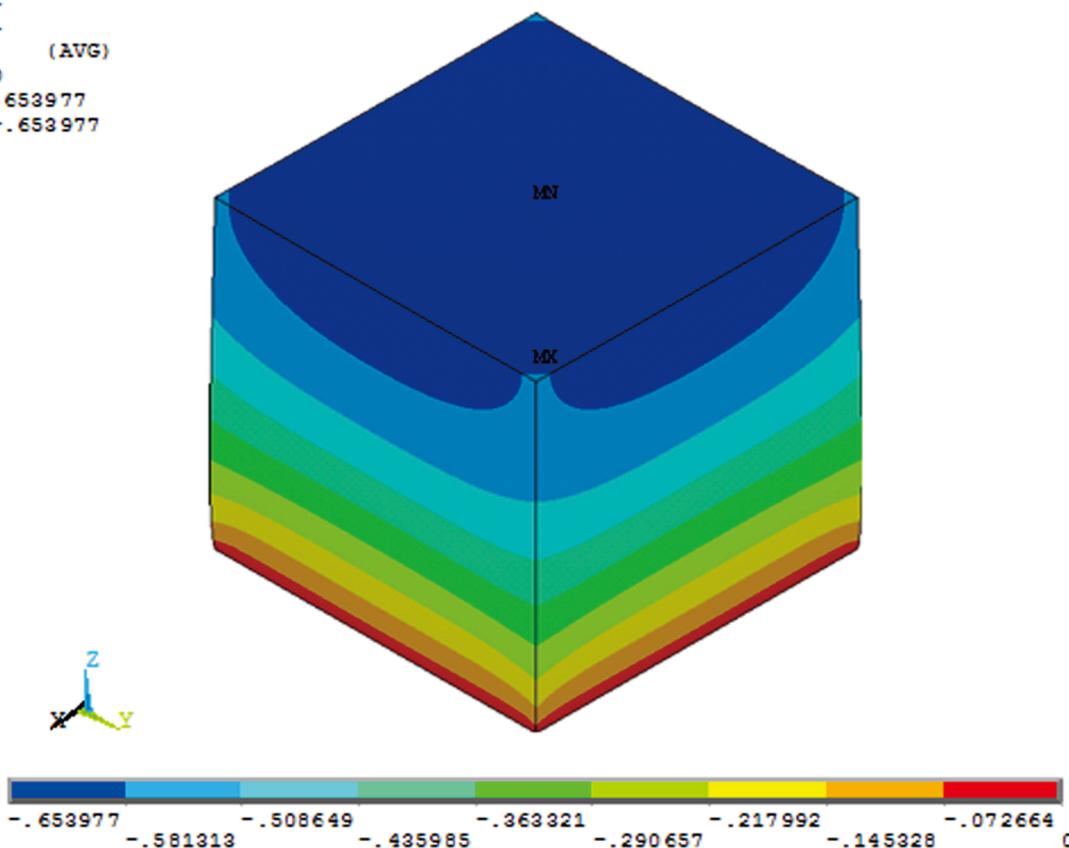


Journal of Applied Mathematics and Physics

1
NODAL SOLUTION
STEP=1
SUB =1
TIME=1
U2 (AVG)
RSYS=0
DMX = .653977
SMN = -.653977

ANSYS
OCT 8 2011
09:15:16



2013 Conference on Computational Mechanics (CCM 2013) Technical Program Committee

TPC

Prof. IGOR EMRI	University of Ljubljana, Slovenia
Prof. Ramesh K. Agarwal	Washington University in St. Louis, USA
Prof. Rostand Moutou Pitti	Blaise Pascal University, France
Prof. Decheng Wan	Shanghai Jiao Tong University, China
Dr. Eray Uzgören	Middle East Technical University, Northern Cyprus Campus, Turkey
Dr. Mohammad Mehdi Rashidi	Department of Mechanical Engineering, Bu-Ali Sina University, Iran
Dr. H. P. Rani	National Institute of Technology, Warangal (NITW), India
Dr. Wanyang Dai	Nanjing University, China
Prof. Yu Bo	China University of Petroleum-Beijing, China
Dr. Raj Das	University of Auckland, New Zealand

TABLE OF CONTENTS

Volume 1 Number 6

November 2013

On the Average Errors of Multivariate Lagrange Interpolation Z. B. Zhang, Y. J. Jiang.....	1
Detection of the Process about Extreme Weather Events Z. H. Qian, Z. P. Zhang, G. L. Feng.....	6
Apply of Explicit Finite Element in Seismic Ground Motion Computation Y. Z. Bai, X. W. Xu.....	11
Hybrid Post-Processing Procedure for Displacement-Based Plane Elements X. M. Chen, S. Cen, J. Y. Sun, Y. G. Li.....	15
A Monolithic, FEM-Based Approach for the Coupled Squeeze Film Problem of an Oscillating Elastic Micro-Plate Using 3D 27-Node Elements A. Roychowdhury, A. Nandy, C. S. Jog, R. Pratap.....	20
A Parallel FEA Computing Kernel for Building Structures J. Duan, Y. G. Li, X. M. Chen, H. Qi, J. Y. Sun.....	26
Vibration Analysis of Steel Strip in Continuous Hot-Dip Galvanizing Process P. Li, H. Chen.....	31
Effects of Noncircular Inlet on the Flow Structures in Turbulent Jets W. H. Kim, T. S. Park.....	37
Development of a Bi-Material Representative Volume Element Using Damaged Homogenisation Approach A. Jelvehpour, M. Dhanasekar.....	43
Analysis of Fretting Fatigue Crack Initiation in a Riveted Two Aluminum Specimen H. Li, R. Guo, H. M. Cheng, Y. Q. Wei.....	48
Effect Analysis of Gurson Model Parameters on Crack Extension of Pipeline T. P. Li, X. L. Tian.....	54
Application of Peps in Stress Analysis of Nuclear Piping R. Liu, Z. W. Fu, T. P. Li.....	57
Stress Analysis for Reactor Coolant Pump Nozzle of Nuclear Reactor Pressure Vessel L. J. Wen, C. Guo, T. P. Li, C. M. Zhang.....	62
Numerical Study of Turbulent Periodic Flow and Heat Transfer in a Square Channel with Different Ribs A. M. Bagabir, J. A. Khamaj, A. S. Hassan.....	65
Numerical Simulation of PRHR System Based on CFD B. Jia, J. P. Jing, X. D. Qiao, C. M. Zhang.....	74
Study on Seismic Fragility Analysis for Piping of CFR Z. W. Fu, Y. H. Qiao, L. Tang, Y. Chen, J. X. Zuo.....	82
Multiobjective Optimal Design of Underwater Acoustic Projector with Porous Piezocomposite Active Elements A. V. Nasedkin, M. S. Shevtsova, J.-C. Liu, S.-H. Chang, J.-K. Wu.....	89

The figure on the front cover is from the article published in Journal of Applied Mathematics and Physics, 2013, Vol. 1, No. 6, pp. 26-30 by Jin Duan, Yungui Li, Xiaoming Chen, Hu Qi and Jianyun Sun.

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) 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

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©2013 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.

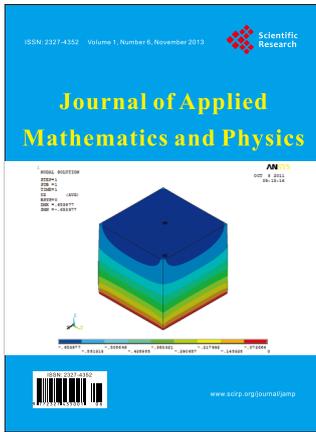
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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: 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 mathematics and physics. 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 mathematics and physics. 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.

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
- 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
- Space Physics
- 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

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, by delivering superior scientific publications and scientific information solution provider that enable advancement in scientific research.

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, world-wide, 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**

Website: <http://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org