Editor-in-Chief

Prof. David L. Carroll
Wake Forest University, USA

Editorial Board

Dr. Murad Y Abu-Farsakh
Louisiana State University, USA
Dr. Mohammad Al-Hwaiti
Al-Hussein Bin Talal University, Jordan
Prof. Moh’d A. M. Al-Nimr
Jordan University of Science and Technology, Jordan
Prof. Shahnor Basri
Putra University, Malaysia
Dr. Hengky Chandrahalim
Swiss Federal Institute of Technology, Switzerland
Prof. Bin Chen
Xi’an Jiaotong University, China
Dr. Adinel Gavrus
National Institut of Applied Sciences Rennes, France
Dr. Krzysztof Górski
Technical University of Radom, Poland
Dr. Zhongwei Guan
University of Liverpool, UK
Dr. Kunn Hadinoto
Nanyang Technological University, Singapore
Dr. Sung-Cheon Han
Daewon University College, Korea (South)
Prof. David Hui
University of New Orleans, USA
Dr. Yunho Hwang
University of Maryland, USA
Prof. Shouetsu Itou
Kanagawa University, Japan
Dr. Sushil Kansal
Panjub University, India
Prof. Jae Moung Kim
Inha University, Korea (South)
Prof. Chui-Chi Lee
She-Te University, Chinese Taipei
Dr. Yiyang Li
The Chinese University of Hong Kong, Hong Kong (China)
Dr. C. W. Lim
City University of Hong Kong, China
Dr. Durães Luisa
Universidade de Coimbra Pólo II, Portugal
Dr. Vandna Luthra
University of Delhi, India
Prof. Yong-Gang Lv
Chongqing University, China
Prof. Magdi Mahmoud
King Fahd University for Petroleum and Minerals, Iran
Prof. Reinaldo Rodriguez Ramos
University of Havana, Cuba
Prof. Yuri Ribakov
Ariel University Center of Samaria, Israel
Dr. Arvind K. Srivastava
NanoSonix Inc., USA
Dr. Aleksandar Stefanovic
Florida Atlantic University, USA
Prof. Kune Y. Suh
Seoul National University, Korea (South)
Prof. Hongbin Sun
Tsinghua University, China
Prof. Gui-Hua Tang
Xi’an Jiaotong University, China
Dr. Costin D. Untaroiu
University of Virginia, USA
Prof. Baolin Wang
Harbin Institute of Technology, China
Dr. Rodrigo Sérgio Wiederkehr
University of Louisville, USA
Dr. Yuwei Wu
City University of Hong Kong, Hong Kong (China)
Dr. Yuanchang Xie
South Carolina State University, USA
Dr. Wei Yan
Trend Micro, USA
Prof. Bo Yu
China University of Petroleum - Beijing, China
Dr. Lei Zhang
University of Maryland, USA
Dr. Ming Zhang
Schlumberger Limited, USA

Editorial Assistant

Yana Yi
Scientific Research Publishing, USA
eng@scirp.org
# TABLE OF CONTENTS

**Volume 3   Number 9   September 2011**

The Simple Model for Bolted Connections in Fire  
M. Yahyai, M. Behzadpoori, A. S. Daryan, A. B. Moghadas  
865

Rehabilitation of an Existing Office Block  
T. Blaszczynski, J. Wdowicki  
876

Application of Geostatistical Models for Estimating Spatial Variability of Rock Depth  
P. Samui, T. G. Sitharam  
886

Influence of the Addition of Sand and Compaction on the Mechanical and Thermal Performances of Plaster  
S. Dorbani, F. Kharchi, F. Salem, K. Arroudj, N. Chioukh  
895

Research on Single-Side Long Edge of Hot Rolled Strip Caused by Asymmetrical Stiffness of Mill Stand  
900

Study of Tsunamis by Dimensional Analysis  
S. Ghasemi  
905

The Design of Heat Exchangers  
A. R. León, M. T. Velázquez, P. O. Diez, F. S. Silva, J. A. Francis, C. R. Rosas  
911

Fuzzy Approach to the Selection of Material Data in Concurrent Engineering Environment  
A. Balakrishna, G. R. Chandra, B. Gogulamudi, C. Someswararao  
921

The P40 Cutting Tool Wear Modelization Machining Fk20MnCr5  
I. Amara, E. Ferkous, F. Bentaleb, R. Aouad  
928

Stress Analysis of Crane Hook and Validation by Photo-Elasticity  
R. Uddanwadiker  
935

Effects of Gas Nitriding on the Mechanical and Corrosion Properties of SACM 645 Steel  
S.-H. Yeh, L.-H. Chiu, H. Chang  
942

Exergy Analysis of Single Array Wind Farm Using Wake Effects  
A. J. Saravanan, C. P. Karthikeyan, A. A. Samuel  
949

Experimental Analysis of Heat Transfer Behavior inside Heat Pipe Integrated with Cooling Plates  
C.-C. Ting, C.-C. Chen  
959

M. RasouliMaleki, M. Mahya, K. Meshkabadi  
965

The figure on the front cover is from the article published in Engineering, 2011, Vol. 3, No. 9, pp. 959-964 by Chen-Ching Ting, Chien-Chih Chen.
Engineering

Journal Information

SUBSCRIPTIONS


Subscription rates:
Print: $59 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)
E-mail: 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: eng@scirp.org
Call for Papers

ENGINEERING
A Journal Published by Scientific Research Publishing, USA
www.scirp.org/journal/eng

Editor-in-Chief
Prof. David L. Carroll       Wake Forest University, USA

ENGINEERING is an international journal dedicated to the latest advancement of engineering. The goal of this journal is to provide a platform for engineers and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of engineering. 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:

- Aerospace Engineering
- Agricultural Engineering
- Applied Mechanics Engineering
- Biological Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Communication Engineering
- Computer Aided Engineering
- Computer Engineering
- Electrical Engineering
- Energy Engineering
- Energy Systems Engineering
- Engine Biofuels
- Engine Engineering
- Engineering Cybernetics
- Engineering Economy
- Engineering Education
- Engineering for Sustainability
- Engineering/Renewable Energy Engineering/Hybrid
- Environmental Engineering
- Green Energy Engineering/Alternative Energy
- Industrial Engineering
- Maintenance Engineering
- Management Engineering
- Maritime Engineering
- Material Engineering
- Materials Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Metallurgical Engineering
- Micro-Electrical-Mechanical Systems Engineering
- Military Engineering
- Mining Engineering
- Molecular Engineering
- Nanoengineering
- Nanotechnology
- Nuclear Engineering
- Oil Engineering
- Particle Engineering
- Petroleum Engineering
- Power Engineering
- Process Engineering
- Public Safety Information
- Radar Engineering
- Safety Systems Engineering
- Social and Environmental Impact of Engineering Innovation
- Software Engineering
- Structural Engineering
- Test Engineering
- Transportation Engineering

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 be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. For more details, please access the website.

★★ Website and E-Mail

http://www.scirp.org/journal/eng            eng@scirp.org