ISSN: 1947-3931 Volume 11, Number 1, January 2019



# Engineering



# **Journal Editorial Board**

ISSN Print: 1947-3931 ISSN Online: 1947-394X

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

.....

# Editor-in-Chief

Prof. David L. Carroll Wake Forest University, USA

## **Editorial Board**

Dr. Murad Y. Abu-Farsakh Louisiana State University, USA

Prof. Moh'd A. M. Al-Nimr Jordan University of Science and Technology, Jordan

Prof. Abbas Amini Western Sydney University, Australia

Prof. Shahnor Basri Putra University, Malaysia

Prof. Roberto CapataUniversity of Roma Sapienza, ItalyProf. Bin ChenXi'an Jiaotong University, ChinaProf. Luisa DurãesUniversity of Coimbra, Portugal

Dr. Adinel GavrusEuropean University of Brittany, FranceDr. Krzysztof GórskiTechnical University of Radom, PolandDr. Sung-Cheon HanDaewon University College, South Korea

Prof. David HuiUniversity of New Orleans, USAProf. Yunho HwangUniversity of Maryland, USA

Dr. Renjie JiChina University of Petroleum, ChinaProf. Jayanna KanchikereSt. Peter's Engineering College, India

**Prof. Jae Moung Kim**Inha University, South Korea

Dr. Yi-Yang Li

The Chinese University of Hong Kong, China

Dr. Vandna Luthra University of Delhi, India

**Prof. Magdi Mahmoud** King Fahd University for Petroleum and Minerals, Saudi Arabia

Prof. Andrzej S. NowakAuburn University, USAProf. Reinaldo Rodriguez RamosUniversity of Havana, Cuba

Prof. Yuri Ribakov Ariel University Center of Samaria, Israel

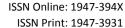
**Dr. P. Sanjeevikumar** Department of Electrical and Electronics Engineering, South Africa

Prof. Kune Y. Suh Seoul National University, South Korea

Prof. Hongbin SunTsinghua University, ChinaProf. Gui-Hua TangXi'an Jiaotong University, ChinaProf. Costin D. UntaroiuUniversity of Virginia, USADr. Rodrigo Sérgio WiederkehrUniversity of Louisville, USA

Dr. Yufei Wu City University of Hong Kong, China

Prof. Wei ZhanTexas A & M University, USAProf. Lei ZhangUniversity of Maryland, USAProf. Ming ZhangSchlumberger Limited, USA





# **Table of Contents**

# Volume 11 Number 1 January 2019 Comparison between Lambert and Maxwell Approaches in the Modelling of Microwave Heating of Liquid Foods Application of GIS for Mapping Rainwater-Harvesting Potential: Case Study Wollert, Victoria S. N. Baby, C. Arrowsmith, N. Al-Ansari. Automotive Aerodynamics Analysis Using Two Commonly Used Commercial Software Development of a Series Hybrid Electric Aircraft Pushback Vehicle: A Case Study Practical Study for the Effect of Speed, Direction of Acceleration and Type of Machine on Vibrations Transferred to the Steering Wheel Horticulture Tractor Type (Goldoni) G. A. Dahham, S. T. Muhamed, S. M. Saleh. Effects of the Form Factor and the Force of the Gravity on the Thermal Exchanges by Natural Convection in a Rectangular Cavity Filled with Nanofluid Mapping the Wall-Region Dynamics of High-Flux Gas-Solid Riser Using Scaling Regions from the Solid Concentration Time Series J. M. Jeremiah, S. V. Manyele, A. K. Temu, J.-X. Zhu.

# Engineering (ENG)

### Journal Information

#### **SUBSCRIPTIONS**

The *Engineering* (Online at Scientific Research Publishing, <a href="www.SciRP.org">www.SciRP.org</a>) is published monthly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$89 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: <a href="mailto:sub@scirp.org">sub@scirp.org</a>

#### **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 © 2019 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 © 2019 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: eng@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





Website: http://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org