

ISSN: 2331-4222 Volume 7, Number 3, August 2019



World Journal of Engineering and Technology



ISSN: 2331-4222



9 772331 422004 03

www.scirp.org/journal/wjet

Journal Editorial Board

ISSN Print: 2331-4222 ISSN Online: 2331-4249
<http://www.scirp.org/journal/wjet>

Editors-in-Chief

Prof. James E. Alleman
Prof. Gwang-Hee Kim

Iowa State University, USA
Kyonggi University, South Korea

Associate Editor-in-Chief

Prof. Sangyong Kim

Kyonggi University, South Korea

Topic Editors-in-Chief

Prof. Wahied Gharieb Ali
Dr. Ayman Batisha
Prof. Halil Ceylan
Prof. Carlos Chastre
Prof. Jan Furch
Dr. Cristina Gentilini
Dr. Dong-Hee Lee
Prof. Cheuk Ming Mak
Prof. Antonio Martinez-Ferez
Dr. Yoonseok Shin
Dr. Youngje Sung
Prof. Stefano Utili
Prof. Ming-Xing Zhang

Computers & Systems Engineering Department, Egypt
International Sustainability Institute, Egypt
Iowa State University, USA
Universidade NOVA de Lisboa, Portugal
Military Technology and Equipment, Czech Republic
University of Bologna, Italy
Kyonggi University, South Korea
The Hong Kong Polytechnic University, China
University of Granada, Spain
Kyonggi University, South Korea
Kyonggi University, South Korea
University of Warwick, UK
The University of Queensland, Australia

Editorial Board

Prof. Abdullah M. Al-Shaalan
Dr. Eugene Ch'ng
Prof. M. M. Elshami
Dr. Negoescu Florin
Prof. C. P. Huang
Prof. Junhui Li
Dr. Mingxin Li
Dr. Wade R. Marcum
Dr. Christos Mias
Dr. Stefano de Miranda
Dr. Ajay Kumar Mishra
Prof. Samy Oraby
Prof. Hristo Sapoundjiev
Dr. Mohammed Sazid
Prof. Mehdi Setareh
Prof. Shey-Huei Sheu
Prof. Faisal Talib

King Saud University, Saudi Arabia
University of Nottingham, China
University of Dammam, Saudi Arabia
“Gheorghe Asachi” Technical University of Iasi, Romania
University of Delaware, USA
Central South University, China
University of Delaware, USA
Oregon State University, USA
University of Warwick, UK
University of Bologna, Italy
University of Johannesburg, South Africa
Port Said University, Egypt
Natural Resources Canada, Canada
King Abdulaziz University, Saudi Arabia
Virginia Polytechnic Institute and State University, USA
Providence University, Chinese Taipei
University Polytechnic, India

Table of Contents

Volume 7 Number 3
August 2019
Remaining Oil Distribution Law and Potential Tapping Strategy of Horizontal Well Pattern in Narrow Oil Rim Reservoir with Gas Cap and Edge Water

X. L. Zhu, Z. B. Liu, X. R. Wang, Z. Q. Meng, Q. Zhu.....355

Stress Analysis of Buried Pipeline Installed by Horizontal Directional Drilling Using ANSYS Finite Element Software

F. T. Olumoko, C. V. Ossia.....365

Quantitative Characterization and Dynamic Law of Interlayer Interference for Multilayer Commingled Production in Heavy Oil Reservoirs by Numerical Simulation

D. Liu, F. Y. Zhang, Q. Zhu, X. R. Wang, J. Fan.....379

Simulation and Experimental Study on Spray Characteristics of Gas-Assisted Urea Spray Gun

Z. F. Zhu, P. Chen, S. Wang, J. H. Gui, W. X. Wang.....396

Effects of Moisture Content and Plasticity Index on Duncan-Chang Model Parameters of Hydraulic Fill Soft Soil

E. Z. Chen, M. Yan, J. H. Ding, C. Gao, Y. Gan.....408

Kinetics of Elution of Gentamicin from a Gentamicin-Loaded PMMA Bone Cement

G. Lewis, L. Li.....418

Availability, Performance and Reliability Evaluation for PV Distributed Generation

A. K. Al-Sefri, A. M. Al-Shaalan.....429

Analysis of Influencing Factors of Silt Solidified Soil in Flowing State

J. H. Ding, Z. M. Feng, D. X. Sun, K. K. You, M. H. Yan, Y. L. Xun.....455

Investigation of Combustion Characteristics of Premixed Propane/Air Flame

A. S. Al-Shahrani.....465

Effect of Pneumatic Boxing Gloves on Impact Kinematics and Their Relationship to Impact Forces

P. Perkins, A. Jamieson, W. Spratford, A. Hahn.....472

Experimental Study on Secondary Wear of Friction Pair Surface

Y. Q. Gou, Y. H. Yan.....513

Study of External Characteristics of Hydraulic Electromagnetic Regenerative Shock Absorber

M. Y. Iqbal, Z. F. Wu, G. Z. Xu, S. A. Bukhari.....520

Simulation Analysis of Characteristics for Independent Metering Control System Based on Downstream Compensation

G. T. Zhang, J. Xu, J. Yang, K. L. Liu.....536

World Journal of Engineering and Technology (WJET)

Journal Information

SUBSCRIPTIONS

The *World Journal of Engineering and Technology* (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly 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 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

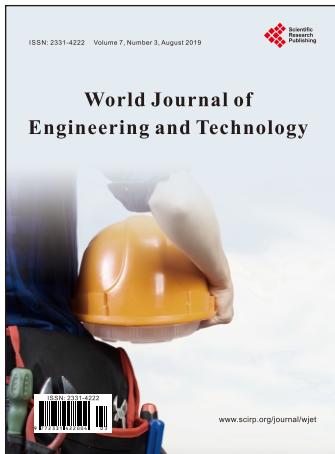
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any 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: wjet@scirp.org

Call for Papers



World Journal of Engineering and Technology (WJET)

ISSN Print: 2331-4222 ISSN Online: 2331-4249
<http://www.scirp.org/journal/wjet>

World Journal of Engineering and Technology (WJET) is an open access journal published quarterly. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various issues and developments in all aspects of engineering and technology.

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous peer-review process. Accepted papers will immediately appear online followed by printed in hard copy. The areas covered by World Journal of Engineering and Technology (WJET) include but are not limited to the following fields:

Aerospace Engineering and Technology
Architectural Engineering and Technology
Artificial Intelligence Technology
Automatic Speech Recognition Technology
Bioprocess Engineering
Chemical Technology
Civil Engineering
Composites Engineering
Control Engineering
Data Engineering
Ecological Science and Technology
Electrical and Computer Engineering
Engineering Education
Engineering Geology
Engineering Physics
Environmental Sciences
Food Science and Engineering
Genetic Engineering and Biotechnology
Green Energy Engineering and Technology
Hydraulic Engineering
Industrial Technology

Information Technology
Manufacturing Engineering and Technology
Materials Science and Engineering
Medical and Biomedical Engineering
Micro-System Technology
Military Technology and Equipment
Nano-System Technology
Naval Engineering
Nuclear Science and Technology
Opto-Mechatronics
Particle Physics
Petroleum Engineering
Pharmaceutical Engineering
Polymer Engineering
Reservoir Engineering
Security Engineering
Structural Engineering
Textile Engineering
Traffic Engineering
Visualization Technology

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.

Website and E-Mail

<http://www.scirp.org/journal/wjet>

Email: wjet@scirp.org