

Open Journal of Applied Sciences



Journal Editorial Board

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

Editors-in-Chief

Prof. A. C. Matin Stanford University School of Medicine, USA

Prof. Harry E. RudaUniversity of Toronto, Canada

Editorial Board

Prof. Terry L. Alford Arizona State University, USA

Dr. Y. Bilgin Altundas Schlumberger-Doll Research, USA

Dr. Demetrios A. Arvanitis Academy of Athens, Greece

Prof. Idress Hamad Attitalla Botany Department, Faculty of Science, Omar Al-Mukhtar University, Libya

Prof. Ezekiel BaharUniversity of Nebraska, USAProf. Der-Chen ChangGeorgetown University, USAProf. Yong ChenEcole Normale Supérieure, France

Dr. Paul Crilly
 Prof. Andrzej T. Galecki
 Dr. Krassimir Georgiev
 The University of Tennessee, Knoxville, USA
 University of Michigan Medical School, USA
 Bulgarian Academy of Sciences (BAS), Bulgaria

Dr. Chunlei GuoUniversity of Rochester, USA

Prof. Paloma R. Horche
Polytechnic University of Madri, Spain
Dr. Sheng-He Huang
University of Southern California, USA
Prof. Deqing Liang
The Chinese Academy of Sciences, China

Prof. Rodica Luca "Gheorghe Asachi" Technical University, Romania

Prof. Wen-Xiu Ma
University of South Florida, USA
Prof. Jukka P. Matinlinna
The University of Hong Kong, China

Dr. Vishnu Narayan Mishra Indira Gandhi National Tribal University, India

Prof. Richard Mu Fisk University, USA

Prof. Valeriy Perminov Tomsk Polytechnic University, Russia

Prof. Singiresu S. Rao
University of Miami, USA
Dr. Jie Shen
University of Michigan, USA

Dr. M. P. SrinivasanNational University of Singapore, Singapore

Dr. Tian TangUniversity of Alberta, Canada

Dr. Low-Hong TongNational University of Singapore, Singapore

Prof. Dimos A. Triantis Technological Educational Institution of Athens, Greece

Dr. Jan Valdman University of South Bohemia, Czech Republic

Dr. Giovanni ValdrèUniversity of Bologna, Italy

Dr. Yiru Xu University of Michigan Medical School, USA

Prof. Changying ZhaoShanghai Jiao Tong University, ChinaProf. Shufeng ZhouUniversity of South Florida, USA



ISSN Online: 2165-3925 ISSN Print: 2165-3917

Table of Contents

Volume 9 Number 4	April 2019
Possible Sustainability of Intermodal Transportation in Africa	
C. K. Chenikwi, X. F. Wang	139
SCM Implementation Decisions of Principal-Agent under Asymmetric Info	rmation
L. N. Wang, S. Poelmans, K. Milis	159
New Composite Equalization Strategy for Lithium Battery Packs	
J. C. Ni, S. C. Wang, K. Wu	172
Design and Analysis of MEMS Based Aluminum Nitride (AlN), Lithium Nio and Zinc Oxide (ZnO) Cantilever with Different Substrate Materials for Piezoelectric Vibration Energy Harvesters Using COMSOL Multiphysics Software	obate (LiNbO₃)
A. M. Alsaad, A. A. Ahmad, Q. M. Al-Bataineh, N. S. Daoud, M. H. Khazaleh	181
Stability Analysis of Periodic Solutions of Some Duffing's Equations	
E. O. Eze, U. E. Obasi, E. U. Agwu	198
Hinterland Intermodal Freight Flow Optimization for Ports Competition Ev West Africa ECOWAS Region	ridence of
B. M. Allate	215
Freshwater Purification by Vacuum Airlift Column Using Methyl Isobutyl Carbinol and Casein	
A. H. Barkaï, M. El Hajem, D. Bongo, JY. Champagne	230
The Principles behind a Strategic Plan	
F. De Andreis.	240
Rail-Road Hinterland Intermodal Terminal Location in West Africa Region of Corridor Port of Abidjan to Ouagadougou-Bamako	—Case Study
B. M. Allate	246
Research on the Construction Priority Model of Bus Lanes	
L. J. Song, X. D. Sun, Y. L. He	260

Open Journal of Applied Sciences, 2019, 9, 139-305





ISSN Online: 2165-3925 ISSN Print: 2165-3917

Determination of Radium-226 in Rock Samples by Liquid Scintillation Counter	
W. M. Abdellah	270
An Evaluation of West and Central African Ports to Serve as a Hub on the Gulf of Guinea Container Ports Range	
B. N. Veronique, Y. F. Huang	285

Call for Papers



Open Journal of Applied Sciences

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

Open Journal of Applied Sciences (OJAppS) is an international peer-reviewed, open-access journal publishing in English original research studies, reviews in diverse areas of applied sciences. 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 applied sciences and to keep a record of the state-of-the-art research in related areas.

Subject Coverage

The journal publishes original papers including but not limited to the following fields:

Applied Behavioral Science Applied Biology Applied Chemistry Applied Ecology Applied Economics Applied Engineering Applied Genetics Applied Geography Applied Linguistics Applied Mathematics Applied Mechanics Applied Philosophy Applied Physics Applied Physiology Applied Psychology Applied Sociology Artificial Intelligence Computing 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.

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 submission, please access the website.

Website and E-Mail

http://www.scirp.org/journal/ojapps E-mail: ojapps@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