

Open Journal of Civil Engineering



ISSN: 2164-3164



Journal Editorial Board

ISSN Print: 2164-3164 ISSN Online: 2164-3172

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

Editor-in-Chief

Prof. Hwai-Chung Wu

Wayne State University, USA

Associate Editors

Prof. M. Amin Hariri-Ardebili

University of Colorado, USA

Prof. Raja Rizwan Hussain

King Saud University, Saudi Arabia

Editorial Board

Prof. Alireza Afshari

Aalborg University, Denmark

Prof. Ayman Batisha

Ministry of Water Resources and Irrigation, Egypt

Prof. Fabio Bisegna

Sapienza University of Rome, Italy

Prof. Christopher Chao

The Hong Kong University of Science and Technology, China

Prof. Carlos Chastre

NOVA University of Lisbon, Portugal

Dr. C.D. Eamon

Wayne State University, USA

Dr. Massimiliano Ferraioli

University of Campania "Luigi Vanvitelli", Italy

Prof. Cristina Gentilini

University of Bologna, Italy

Prof. Jian Kang

University of Sheffield, UK

Dr. S. Khorram

Eastern Mediterranean University, Cyprus

Prof. Vojko Kilar

University of Ljubljana, Slovenia

Dr. Dong-Kyu Kim

Seoul National University, South Korea

Prof. Kiyoshi Kobayashi

Kyoto University, Japan

Prof. Triantafyllos Makarios

Aristotle University of Thessalonik, Greece

Prof. George C. Manos

Aristotle University of Thessaloniki, Greece

Prof. Ali M. Memari

Pennsylvania State University, USA

Prof. Low Sui Pheng

National University of Singapore, Singapore

Prof. Miroslav Premrov

University of Maribor, Slovenia

Prof. Nicola Pugno

University of Trento, Italy

Dr. Ahmad Qasaimeh

Department of Civil Engineering, Jordan

Dr. Gian A. Rassati

University of Cincinnati, USA

Dr. Rehan Sadiq

University of British Columbia, Canada

Prof. Evangelos J. Sapountzakis

National Technical University of Athens, Greece

Prof. Mehdi Setareh

Virginia Tech University, USA

Prof. Wen-Pei Sung

National Chin-Yi University of Technology, Chinese Taipei

Prof. Chong-Shien Tsai

Feng Chia University, Chinese Taipei

Prof. Francesco Ubertini

University of Bologna, Italy

Dr. Roberto Valentino

University of Parma, Italy

Dr. Heng Wei

The University of Cincinnati, USA

Dr. I-Tung Yang

National Taiwan University of Science and Technology, Chinese Taipei

Prof. Ka-Veng Yuen

University of Macau, China

Prof. Vahid Zanjani Zadeh

Bechtel Corporation, USA

Prof. Jun Zhang

Tsinghua University, China

Table of Contents

Volume 8 Number 3

September 2018

Wind-Induced Failure Analysis and Retrofit of an Existing Steel Structure

C. Maraveas, Z. Fasoulakis.....271

Studies on Seismic Identification and Reinforcement Design of Building Structures

Y. Liu.....292

Degradation of Retro-Reflectivity of Thermoplastic Pavement Markings: A Review

V. Owusu, Y. A. Tuffour, D. A. Obeng, M. Salifu.....301

Development of GIS Interface Tool for GAMES Model and Its Application to an Agricultural Watershed in Southern Ontario

K. Panjabi, N. Allataifeh, C. Dai, R. Rudra, P. Goel, N. Shrestha, R. Shukla.....312

The New Formula of Seismic Rigidity Method

A. S. Aleshin.....326

Open Journal of Civil Engineering (OJCE)

Journal Information

SUBSCRIPTIONS

The *Open Journal of Civil Engineering* (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 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 © 2018 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 © 2018 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: ojce@scirp.org



Call for Papers

Open Journal of Civil Engineering

ISSN Print: 2164-3164 ISSN Online: 2164-3172

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

Open Journal of Civil Engineering (OJCE) is an international journal dedicated to the latest advancement of civil engineering. 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 civil engineering.

Editor-in-Chief

Prof. Hwai-Chung Wu

Wayne State University, USA

Associate Editors

Prof. M. Amin Hariri-Ardebili
Prof. Raja Rizwan Hussain

University of Colorado, USA
King Saud University, Saudi Arabia

Editorial Board

Prof. Alireza Afshari
Prof. Ayman Batisha
Prof. Fabio Bisegna
Prof. Christopher Chao
Prof. Carlos Chastre
Dr. C.D. Eamon
Prof. Cristina Gentilini
Prof. Jian Kang
Dr. S. Khorram
Prof. Vojko Kilar
Dr. Dong-Kyu Kim

Prof. Kiyoshi Kobayashi
Prof. Triantafyllos Makarios
Prof. George C. Manos
Prof. Ali M. Memari
Prof. Low Sui Pheng
Prof. Miroslav Premrov
Prof. Nicola Pugno
Dr. Ahmad Qasaimeh
Dr. Gian A. Rassati
Dr. Rehan Sadiq
Prof. Evangelos J. Sapountzakis

Prof. Mehdi Setareh
Prof. Wen-Pei Sung
Prof. Chong-Shien Tsai
Prof. Francesco Ubertini
Dr. Roberto Valentino
Dr. Heng Wei
Dr. I-Tung Yang
Prof. Ka-Veng Yuen
Prof. Vahid Zanjani Zadeh
Prof. Jun Zhang

Subject Coverage

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:

- Assemblage and System
- Behavior of Structures
- Behavior of Structures under Seismic Loads
- Building and Environmental Acoustics
- Building Climate Systems
- Building Energy
- Civil and Environmental Engineering
- Coastal Engineering
- Composite Materials
- Concrete Structures
- Construction Economics
- Construction Engineering
- Design and Performance of Green Building
- Design Optimization of Structures
- Earthquake Engineering
- Energy Efficient Building Technology
- Energy Saving Building Materials
- Evaluation of Building Envelope Systems under
- Structural and Environmental Loads
- Evaluation of Glazing Systems for Energy Performance
- Fire Engineering
- Foundations Dynamics
- Geotechnical Engineering
- Health Monitoring and Life Prediction of Structures
- High Performance Concrete
- Hydraulic Engineering
- Life Cycle Engineering
- Materials and Durability
- Materials Engineering
- Mechanics and Materials Aspects of Advanced Construction Materials
- Municipal or Urban Engineering
- Nondestructive Testing and Evaluation
- Numerical Modelling of Structures
- Optimal Design of Structures
- Properties and Mechanics of Concrete
- Residential, Commercial, Industrial and Public Works
- Seismic Evaluation of Building Nonstructural Components
- Simulation Optimization and Risk Management
- Soil-Structure Interaction
- Structural Engineering
- Structural Evaluation of Panelized and Masonry Wall Systems
- Structural Reliability Analysis
- Surveying
- Sustainable Structures
- Transportation Engineering
- Ventilation and Indoor Air Quality
- Water Supply and Drainage

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 submissions, please access the website.

Website and E-Mail

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

E-mail: ojce@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