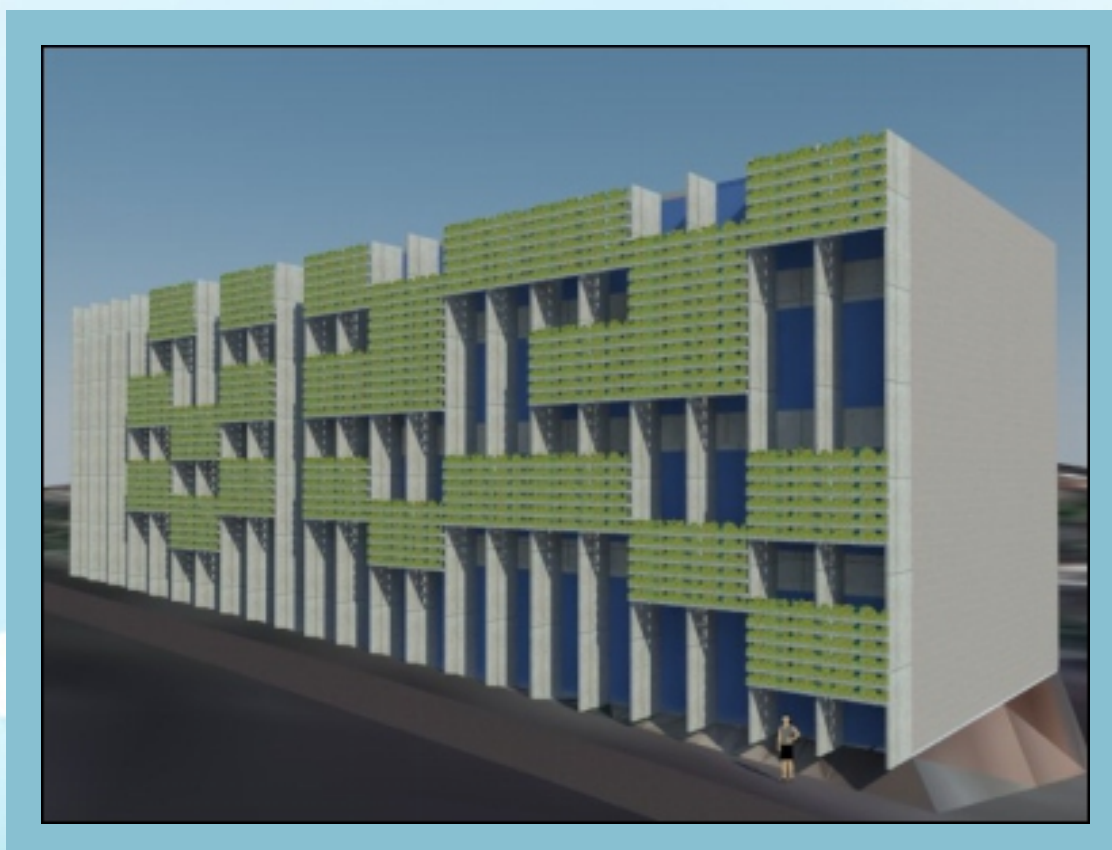


Open Journal of Civil Engineering



ISSN: 2164-3164



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

Journal Editorial Board

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

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

Editor-in-Chief

Prof. Hwai-Chung Wu

Wayne State University, USA

Associate Editor

Prof. Raja Rizwan Hussain

King Saud University, Saudi Arabia

Editorial Board

Dr. Olanrewaju Abdullateef

Universiti Tunku Abdul Rahman, Malaysia

Prof. Alireza Afshari

Aalborg University, Denmark

Dr. Ali Awaludin

Gadjah Mada University, Indonesia

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. You Dong

The Hong Kong Polytechnic University, Hong Kong (China)

Dr. Massimiliano Ferraioli

University of Campania "Luigi Vanvitelli", Italy

Prof. Cristina Gentilini

University of Bologna, Italy

Dr. Behzad Kalantari

Hormozgan University, Iran

Prof. Jian Kang

University of Sheffield, UK

Prof. Vojko Kilar

University of Ljubljana, Slovenia

Prof. Kiyoshi Kobayashi

Kyoto University, Japan

Dr. Guan Lin

The Hong Kong Polytechnic University, Hong Kong, China

Prof. Triantafyllos Makarios

Aristotle University of Thessalonik, Greece

Prof. George C. Manos

Aristotle University of Thessaloniki, Greece

Prof. Haji Mohd Idrus Haji Mohd Masirin

Universiti Tun Hussein Onn Malaysia, Malaysia

Prof. Ali M. Memari

Pennsylvania State University, USA

Dr. Hosein Naderpour

Semnan University, Iran

Prof. Deepa G. Nair

Cochin University of Science & Technology, India

Prof. John-Paris Pantouvakis

National Technical University of Athens, Greece

Prof. Low Sui Pheng

National University of Singapore, Singapore

Prof. Miroslav Premrov

University of Maribor, Slovenia

Prof. Nicola Pugno

University of Trento, Italy

Dr. Ying Qin

Southeast University, China

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

Dr. Xijun Shi

Texas State University, USA

Prof. Zengqing Sun

Central South University, China

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

Prof. Ka-Veng Yuen

University of Macau, China

Prof. Jun Zhang

Tsinghua University, China

Table of Contents

Volume 13 Number 4

December 2023

Comprehensive Analysis Method of Slope Stability Based on the Limit Equilibrium and Finite Element Methods and Its Application	
Y. J. Wang, Y. F. Li, J. Z. Chen.....	555
Strategies for Advancing Road Construction Slope Stability: Unveiling Innovative Techniques for Managing Unstable Terrain	
G. O. Adeoti, J. K. Agbelele, C. P. Yabi, R. N. Kinhoun, É. A. Alamou.....	572
Evaluating the Influence of Sea Level Rise on Beel Kapalia’s Livelihood and Local Adaptation Strategies: Perspectives from the Local Community	
Md. R. Rahman, T. Tareque, S. Mirmotalebi.....	617
Investigation on the Fire Resistance of Cellular Steel Beam with Sinusoidal Openings	
M. S. Mutentu, B. G. M. Horacio, Y. H. Yang.....	637
Experimental Research of Impact Toughness of the Kazakhstani Construction Steel— Assessment of Compliance with the Provisions of 1993 Eurocode	
B. Kulbayev, V. Lapin, A. Shakhnovich, T. Tuleyev, S. Aldakhov, Y. Aldakhov, A. Ali.....	664
Fracture Mechanics and Its Application in the Fatigue Behavior of Reinforced Welded Hand-Holes in Aluminum Light Poles	
C. R. Rusnak, C. C. Menzemer.....	677
Performance Evaluation of Asphalt Concrete Based on Basalt Aggregates of Diack and Quartzite of Bakel	
M. Coulibaly, M. Ba, M. Thiam, B. Diouf.....	695
The Technique of the Tri-Layer Coating: An Effective Solution for the Protection of Earthen Constructions	
S. Banakinao, S. Drovou, K. Lolo, K. Attipou.....	706
Volcaniclastic Deposit Analysis Using Grain Size, Digital and Stereological Techniques	
A. Rangel-Durán, V. V. Espejel-García, A. Villalobos-Aragón, D. Espejel-García, J. Lucero-Álvarez, A. G. Mendez-Salas.....	723
Vehicle-Bridge Interaction Simulation and Damage Identification of a Bridge Using Responses Measured in a Passing Vehicle by Empirical Mode Decomposition Method	
S. Rana, Md. R. Zaman, Md. I. I. Ifty, S. Mirmotalebi, T. Tareque.....	742

Comprehensive Analysis of the Effects of Superplasticizer Variation on the Workability and Strength of Ready-Mix Concrete

T. Tareque, F. Tousif, M. A. Billah, A. A. M. Jabir, S. Mirmotalebi756

The Ultimate Anti-Seismic Design Method

I. N. Lymperis771

Weld Joint Efficiency of the Kazakhstani Constructional Steel

B. Kulbayev, V. Lapin, A. Shakhnovich, T. Tuleyev, S. Aldakhov, Y. Aldakhov, A. Ali 802

Influence of Some Plant Fibers on the Mechanical Performance of Composite Materials

S. P. Quenum, Y. S. T. Kiki, J. K. Agbelele, C. P. Yabi, E. C. Adjovi..... 814

Open Journal of Civil Engineering (OJCE)

Journal Information

SUBSCRIPTIONS

The *Open Journal of Civil Engineering* (Online at Scientific Research Publishing, <https://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 © 2023 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 © 2023 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

<https://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 Editor

Prof. Raja Rizwan Hussain

King Saud University, Saudi Arabia

Editorial Board

Dr. Olanrewaju Abdullateef
Prof. Alireza Afshari
Dr. Ali Awaludin
Prof. Ayman Batisha
Prof. Fabio Bisegna
Prof. Christopher Chao
Prof. Carlos Chastre
Dr. You Dong
Dr. Massimiliano Ferraioli
Prof. Cristina Gentilini

Dr. Behzad Kalantari
Prof. Jian Kang
Prof. Vojko Kilar
Prof. Kiyoshi Kobayashi
Dr. Guan Linv
Prof. Triantafyllos Makarios
Prof. George C. Manos
Prof. Haji Mohd Idrus Haji Mohd Masirin
Prof. Ali M. Memari
Dr. Hosein Naderpour

Prof. Deepa G. Nair
Prof. John-Paris Pantouvakis
Prof. Low Sui Pheng
Prof. Miroslav Premrov
Prof. Nicola Pugno
Dr. Ying Qin
Dr. Gian A. Rassati
Dr. Rehan Sadiq
Prof. Evangelos J. Sapountzakis
Prof. Mehdi Setareh

Dr. Xijun Shi
Prof. Zengqing Sun
Prof. Wen-Pei Sung
Prof. Chong-Shien Tsai
Prof. Francesco Ubertini
Dr. Roberto Valentino
Dr. Heng Wei
Prof. Ka-Veng Yuen
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

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

E-mail: ojce@scirp.org