



Open Journal of Civil Engineering





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 Editors

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. You Dong The Hong Kong Polytechnic University, Hong Kong (China)

Dr. Massimiliano Ferraioli University of Campania "Luigi Vanvitelli", Italy

Prof. Cristina GentiliniUniversity of Bologna, ItalyProf. Jian KangUniversity of Sheffield, UKProf. Vojko KilarUniversity of Ljubljana, Slovenia

Prof. Kivoshi Kobayashi Kyoto University, Japan

Prof. Triantafyllos MakariosAristotle University of Thessalonik, GreeceProf. George C. ManosAristotle University of Thessaloniki, GreeceProf. Ali M. MemariPennsylvania State University, USA

Dr. Hosein Naderpour Semnan University, Iran

Prof. Low Sui Pheng National University of Singapore, Singapore

Prof. Miroslav PremrovUniversity of Maribor, SloveniaProf. Nicola PugnoUniversity of Trento, ItalyDr. Ying QinSoutheast University, ChinaDr. Gian A. RassatiUniversity of Cincinnati, USA

Dr. Rehan Sadiq University of British Columbia, Canada

Prof. Evangelos J. Sapountzakis National Technical University of Athens, Greece

Prof. Mehdi SetarehVirginia Tech University, USADr. Xijun ShiTexas State University, USAProf. Zengqing SunCentral 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 UbertiniUniversity of Bologna, ItalyDr. Roberto ValentinoUniversity of Parma, Italy

Dr. Heng Wei The University of Cincinnati, USA

Prof. Ka-Veng YuenUniversity of Macau, ChinaProf. Vahid Zanjani ZadehBechtel Corporation, USAProf. Jun ZhangTsinghua University, China



Volume 10

Number 3

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

September 2020

Table of Contents

Improvement of the Thermal Properties of Cement Mortars by Adding Banana Pseudo-Trunkfibres Impact of Intrinsic Properties of Aggregate and Volumetric Properties of Hot Mixture Asphalt (HMA) in the Influence of the Resistance to Rutting M. L. C. Aidara, M. Ba, A. Carter. Evaluation of Dynamic Modulus of HMA Sigmoidal Prediction Models and Optimization by Approach of U.S. Mesh Sieve by AFNOR and LC Mesh Sieve Development of a Dynamic Modulus Prediction Model for Hot Mixture Asphalt and Study of the Impact of Aggregate Type and Its Electrochemical Properties M. L. C. Aidara, M. Ba, A. Carter......213 Concrete Based on Recycled Aggregates for Their Use in Construction: Case of Goma (DRC) M. M. Grâce, A. N. Ally, M. W. M. Abdias, K. B. Patient, M. Trésor, M. M. Blanche, N. Francois......226 Unified Approach to Assess Engineering Performance of Fill Improved by Shallow to Deep Compaction Based Techniques Using Relative Density A. Alaaeldin, E. Spyropoulos, A. Orabi. Research and Simulation of Parking Resource Sharing Mode in Old Community -Taking Yingmenkou Community as an Example Numerical Study of the Interaction between a Reinforced Concrete Pile and Soil N. M. Nde, D. Fokwa, M. Mbessa, T. T. Tamo, C. Pettang. Deep Foundation Pit Excavations Adjacent to Disconnected Piled Rafts: A Review on Risk Control Practice Seismic Performance Evaluation of Improved Jet Grouted Grid Form with Horizontal Slab in Liquefaction Mitigation

M. M. P. Phyo, H. Hazarika, L. Shi, H. Kaneko, T. Akagawa......301

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 © 2020 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 © 2020 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



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 Editors

Prof. Raja Rizwan Hussain King Saud University, Saudi Arabia

Editorial Board

Prof. Alireza Afshari Prof. Ayman Batisha Prof. Fabio Bisegna Prof. Christopher Chao Prof. Carlos Chastre Dr. You Dong Dr. Massimiliano Ferraioli Prof. Cristina Gentilini Prof. Jian Kang

Prof. Voiko Kilar Prof. Kiyoshi Kobayashi

Prof. Triantafyllos Makarios Prof. George C. Manos Prof. Ali M. Memari Dr. Hosein Naderpour Prof. Low Sui Pheng Prof. Miroslav Premrov Prof. Nicola Pugno Dr. Ying Qin Dr Gian A Rassati Dr. Rehan Sadio

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. 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
- Hvdraulic 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

E-mail: ojce@scirp.org

- 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