

ISSN: 2164-3164

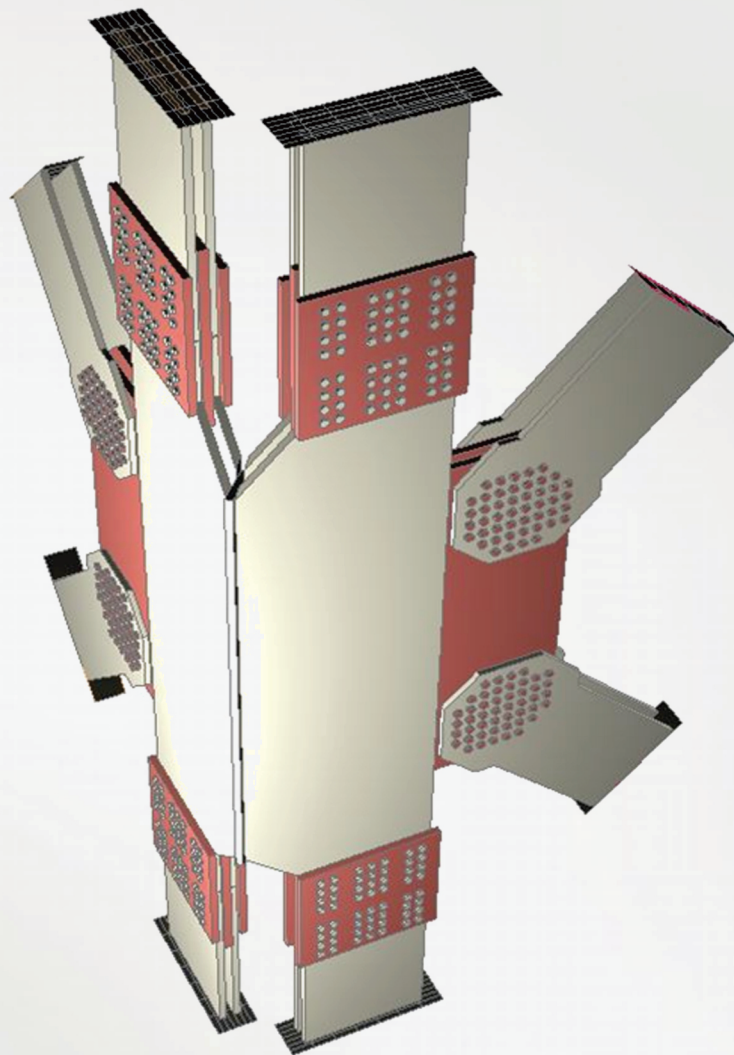
Volume 3, Number 2A, June 2013



Scientific  
Research

# Open Journal of Civil Engineering

Special Issue on Building and Civil Engineering



ISSN: 2164-3164



977216431640302A

[www.scirp.org/journal/ojce](http://www.scirp.org/journal/ojce)

# Journal Editorial Board

ISSN Print: 2164-3164

ISSN Online: 2164-3172

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

---

## Editor-in-Chief

**Dr. Hwai-Chung Wu**

Wayne State University, USA

## Editorial Board

**Prof. Alireza Afshari**

Aalborg University, Denmark

**Prof. Fabio Bisegna**

Sapienza University of Rome, Italy

**Prof. Christopher Chao**

The Hong Kong University of Science and Technology, China

**Dr. Carlos Chastre**

NOVA University of Lisbon, Portugal

**Prof. Bao-Chun Chen**

Fuzhou University, China

**Dr. Cristina Gentilini**

University of Bologna, Italy

**Dr. Raja Rizwan Hussain**

King Saud University, Saudi Arabia

**Prof. Jian Kang**

University of Sheffield, UK

**Dr. Vojko Kilar**

University of Ljubljana, Slovenia

**Prof. Kiyoshi Kobayashi**

Kyoto University, Japan

**Dr. Triantafyllos Makarios**

Institute of Engineering Seismology & Earthquake Engineering, Greece

**Prof. George C. Manos**

Aristotle University of Thessaloniki, Greece

**Prof. Ali M. Memari**

Pennsylvania State University, USA

**Dr. Navid Nastar**

University of Southern California, USA

**Prof. Low Sui Pheng**

National University of Singapore, Singapore

**Prof. Miroslav Premrov**

University of Maribor, Slovenia

**Prof. Nicola Pugno**

Polytechnic University of Turin, Italy

**Prof. Mohammed Raoof**

Loughborough University, UK

**Dr. Gian A. Rassati**

University of Cincinnati, USA

**Dr. Marcus P. Rutner**

Weidlinger Associates, Inc., USA

**Dr. Rehan Sadiq**

University of British Columbia, Canada

**Dr. Evangelos J. Sapountzakis**

National Technical University of Athens, Greece

**Prof. Mehdi Setareh**

Virginia Tech University, USA

**Dr. Zhi Sun**

Tongji 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

**Dr. I-Tung Yang**

National Taiwan University of Science and Technology, Chinese Taipei

**Prof. You-Fu Yang**

Dalian University of Technology, China

**Prof. Hong Yuan**

Jinan University, China

**Prof. Ka-Veng Yuen**

University of Macau, China

**Prof. Jun Zhang**

Tsinghua University, China

## Guest Reviewers

**Muhammad Tariq A. Chaudhary**

**Abdussalam Shibani**

**Giuseppe Vairo**

## TABLE OF CONTENTS

**Volume 3    Number 2A**

**June 2013**

### **Efficiency of Amino Alcohols as Corrosion Inhibitors in Reinforced Concrete**

I. Vyrides, E. Rakanta, T. Zafeiropoulou, G. Batis.....1

### **A Method for the Application of Numerical Simulations during Firefighting Operations Using Pre-Simulated, Model-Based Fire Scenarios**

P. A. Zadeh, U. Rüppel.....9

### **Non-Linear Analysis of Masonry Structures Subjected to External Settlements**

S. Galassi, M. Paradiso, G. Tempesta.....18

### **The Minaret of the Great Mosque in Algiers, a Structural Challenge**

D. Constantinescu, D. Köber.....27

### **The Impact of Acoustics and Energy Efficiency Protocols on Comfort in the Building Industry**

M. Caniato, F. Bettarello.....40

### **Geotechnical, Mineralogical and Chemical Characterization of the Missole II Clayey Materials of Douala Sub-Basin (Cameroon) for Construction Materials**

E. O. Logmo, G. F. N. Ngon, W. Samba, M. B. Mbog, J. Etame.....46

### **Mechanical Properties of Cement Mortar Containing Fine-Grained Fraction of Fly Ashes**

E. Tkaczewska.....54

### **Simulating the Seismic Response of Concentrically Braced Frames Using Physical Theory Brace Models**

L. Chen, L. Tirca.....69

### **The Use of Materials from Biomass as Construction Materials**

F. Giglio.....82

---

The figure on the front cover is from the article published in *Open Journal of Civil Engineering*, 2013, Vol. 3, No. 2A, pp. 27-39 by Dan Constantinescu and Dietlinde Köber.

# **Open Journal of Civil Engineering (OJCE)**

## **Journal Information**

### **SUBSCRIPTIONS**

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

#### **Subscription rates:**

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **COPYRIGHT**

Copyright©2013 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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](mailto: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

Dr. Hwai-Chung Wu

Wayne State University, USA

## Editorial Board

Prof. Alireza Afshari  
Prof. Fabio Bisegna  
Prof. Christopher Chao  
Dr. Carlos Chastre  
Prof. Bao-Chun Chen  
Dr. Cristina Gentilini  
Dr. Raja Rizwan Hussain  
Prof. Jian Kang  
Dr. Vojko Kilar  
Prof. Kiyoshi Kobayashi  
Dr. Triantafyllos Makarios  
Prof. George C. Manos

Prof. Ali M. Memari  
Dr. Navid Nastar  
Prof. Low Sui Pheng  
Prof. Miroslav Premrov  
Prof. Nicola Pugno  
Prof. Mohammed Raoof  
Dr. Gian A. Rassati  
Dr. Marcus P. Rutner  
Dr. Rehan Sadiq  
Dr. Evangelos J. Sapountzakis  
Prof. Mehdi Setareh  
Dr. Zhi Sun

Prof. Wen-Pei Sung  
Prof. Chong-Shien Tsai  
Prof. Francesco Ubertini  
Dr. Roberto Valentino  
Dr. Heng Wei  
Dr. I-Tung Yang  
Prof. You-Fu Yang  
Prof. Hong Yuan  
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

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

E-mail: [ojce@scirp.org](mailto:ojce@scirp.org)