

# International Journal of Structural and Civil Engineering Research

## CONTENTS

---

---

### Volume 5, Number 1, February 2016

#### Building Architecture

Field Measurement and Degradation Rate Analysis of Thermal Insulation Performance by Elapsed Year of Public Building Outer Walls in Korea.....1

*Seung-Hee Ryu, Ji-Hye Ryu, and Won-Hwa Hong*

Ex-Situ Conservation on Nusantara Architecture: Implementation and Challenges (An Overview towards TMII and St übing Freilichtmuseum).....5

*Yusfan Adeputera Yusran*

An Analysis of Korean District Heating System's Heat Supply Load by Building Usages .....12

*Ji-Ae Lee, Won-Hwa Hong, and Ji-Hye Ryu*

A Taxonomy of Construction Supply Chain for Affordable Housing in New Zealand .....16

*Rehan Masood, James Lim, and Vicente A. Gonzalez*

Analysis of Air-Conditioning Energy Consumption Depending on Optional Operation of ERV System Installed in the Apartment Houses in South Korea .....22

*Ji-Hye Ryu, Won-Hwa. Hong, and Ji-Ae Lee*

#### Concrete Structure Design

Numerical Analysis of RC Beam Subjected to Blast Load.....26

*Gang-Kyu Park and Hyo-Gyoung Kwak*

Study on a New-Type Thermal Storage Aerated Concrete .....31

*Min Li and Huan Peng*

Effect of Extremely Hot and Arid Climate on Concrete Properties .....35

*Saleh A. Al-Saleh*

Review on Hybrid Fiber Reinforced High Performance High Volume Flyash Concrete .....39

*Rooban Chakravarthy Srikanth Venkatesan, and Indubhushan Patnaikuni*

#### Structural Mechanics

A Review on Exploring the Behavior of Multi-Layer Composite Structures Under Dynamic Loading.....44

*Saima Ali, Xuemei Liu, Sabrina Fawzia, Jun Wu, Yuan Tong Gu*

Evaluation of Panel Zone Shear Strength in Cruciform Columns, Box-Columns and Double-Web Columns.....52

*Sina. Sarfarazi, Ali. Fakhraddini, and Kiana. Modaresahmadi*

#### Civil Engineering

Effect of Span Length and Crossbeam Spacing on Load Distribution Factor at Girder Bridges.....57

*Hyo-Gyoung Kwak and JoungRae Kim*

Analysis of Controlling Parameters for Shear behavior of Rock Joints with FLAC3D .....	62
<i>Prasoon Tiwari, Hakan Sahin, and Omer F. Usluogullari</i>	
<b>Project Management</b>	
Implementing AHP Approach to Select an Appropriate Financing Method for PPP Highway Projects in Iran .....	67
<i>Esmatullah Noorzai, Kobra Gharouni Jafari, Rouhallah Heshmatnezhad, and Babak Vahedi</i>	
Selecting an Appropriate Finance Method of Public-Private Partnership for Railway Projects in Iran through AHP Method.....	74
<i>Esmatullah Noorzai, Kobra Gharouni Jafari, Mahmood Golabchi, and Sahar Hamedi</i>	