Civil Engineering



Spring 2021

Editor-in-Chief: Mohsen Ghaemian

This Journal is published under the auspices of Sharif University of technology, Office of the Vice-Chancellor-in-Charge of Research.

The Journal is published quarterly in Farsi language, aims at establishing a relationship between scientists active in different branches of science and technology and, in particular, at providing a forum for exchange of knowledge between scientists and technologists related to scientific problems prevailing in contemporary society. The journal also strives to present practical and theoretical7 analyses of these issues and facilitates the circulation of modern scientific findings by scientists and researchers for practical application. In addition, "Sharif" publishes original papers focusing on issues of specific concern to universities, including research, technological advancements, and topics related to matters of higher education.

P.O.BOX 11155-8639 AZADI AVENUE, TEHRAN, I.R. IRAN Phone: (98-21) 66005419 - 66164093 Fax: (98-21) 66012983 Web: http://journal.sharif.ir/ http:// www. globalsciencejournals.com E-mail: pajouhesh@sharif.edu

CONTENTS

- 3 EVALUATION OF SEISMIC LOW CYCLE FATIGUE ON WELDED UNREINFORCED FLANGE-WELDED WEB AND REDUCED BEAM SECTION ON STEEL MOMENT FRAME B. Hosseini Kalej, M. Gerami and M. Ghaderi
- 13 IMPACT OF CONGESTION PRICING POLICY CHANGE ON MODE CHOICE: THE CASE OF TEHRAN A.R. Mamdoohi and E. Hamrang Damirchi Ghoortlar
- EVALUATION OF THE NONLINEAR STATIC BEHAVIOR OF UNSTIFFENED STEEL PLATE SHEAR WALLS WITH/WITHOUT OPENINGS
 F. Behnamfar, H. Sayyadpour, A. Mohammadi and M. Omidi
- 35 **STUDY OF THE EFFECT OF RICE HUSK ASH BASED GEOPOLYMER ON SANDY SOIL STABILIZATION** F. Riahi Dehkordi, V. Toufigh and M.M.Toufigh
- 47 THE EXPERIMENTAL ASSESSMENT OF THE EFFECT OF PAPER WASTE ASH AND SILICA FUME ON IMPROVEMENT OF CONCRETE BEHAVIOR

J. Pourazar, M .Najarchi, B. Sanaaty, M. Najafizad and M. Mirhosseini

- 61 THE INVESTIGATION OF DAM FOUNDATION INTERACTION CONSIDERING THE EFFECT OF FOUNDATION MASS H. Nikravesh Sendi and M. Sohrabi Gilani
- 71 DAMAGE IDENTIFICATION AND QUANTIFICATION OF STRUCTURES BY VIBRATION-BASED MODEL UPDATING METHOD USING TEACHING-LEARNING-BASED OPTIMIZATION A. Kaveh, S.M. Hosseini and F. Barzinpour
- 85 IMPACT OF FLY ASH ON THE PROCESS OF CEMENT-BASED SOLIDIFICATION OF HEAVY METAL CONTAMINATED BENTONITE V.R. Ouhadi and M. Deiranlou
- 95 RELATIONSHIPS BETWEEN SIGNIFICANT, BRACKETED AND UNIFORM DURATIONS WITH EARTHQUAKE INDICES AND SITE CONDITIONS USING IRANIAN SEISMIC DATA M. Rezaeemanesh and H. Saffari
- 105 EFFECT OF THE FREQUENCY SPACING ON MODAL DAMPING ESTIMATION OF A DOUBLE-LAYER GRID S. Salehi, S.A. Mostafavian and M.R. Davoodi
- 117 A STUDY OF CYCLIC PERFORMANCE OF FRAMES EQUIPPED WITH INNOVATIVE DIAMOND-SCHEME BRACING SYSTEM INCLUDING A CIRCULAR YIELDING DAMPER Gh. Pachideh, M.A. Kafi and M. Gholhaki

RESEARCH NOTES:

- PROGRESSIVE COLLAPSE ANALYSIS OF FLAT SLAB BUILDINGS WITH POST-PUNCHING EFFECT
 E. Mousapoor, V. Ghiasi and R. Madandoust
- 143 MODELING DRIVERS' NATURAL BEHAVIOR WHEN OVERTAKING ON UNDIVIDED RURAL ROADS (CASE STUDY: MAZANDARAN PROVINCE) M. Elyasi Gorji, M.R. Ahadi and A. Naderan
- 153 EXPERIMENTAL INVESTIGATION OF PERFORMANCE OF SPRAYED FIRE RESISTIVE MATERIAL ON STEEL STRUCTURES UNDER POST-EARTHQUAKE FIRE

A. Kalali, S. Bakhtiyari, M. Jamali Ashtiani and S. Majid Zamani

APPENDIX

176 ABSTRACTS OF PAPERS IN ENGLISH