## **Civil Engineering**



Summer 2018

## Editor-in-Chief: Seyed Taghi Akhavan Niaki

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 NUMERICAL INVESTIGATION ON THE SEISMIC BEHAVIOUR OF REINFORCED CONCRETE EXTERIOR WIDE BEAM-COLUMN CONNECTIONS WITH ECCENTRICITY M. Moghimi Dehkordi, A.A. Tasnimi and S. Mirzabagheri
- 13 EXPERIMENTAL INVESTIGATION OF THE FLOWFIELD AROUND STRAIGHT SPUR DIKES LOCATED IN A DIFFERENT LOCATION OF 90° BEND
  - M. Mehraein, M. Ghodsian and S.M.A. Najibi
- 23 A HIERARCHICAL ANALYSIS OF FOOD COURT AND PARKING IMPACT ON TRAVEL TO SHOPPING CENTERS A.R. Mahpour, A.R. Mamdoohi, T. Hossein Rashidi and M. Saffarzadeh
- 31 EFFECT OF CACO<sub>3</sub> PARTICLES COVERED BY NANO-CARBON LAYERS ON THE PROPERTIES OF HIGH-STRENGTH CONCRETE H.R. Ehsani, A. Dehghani and M.S. Labafzadeh
- 41 PROBABILISTIC ASSESSMENT OF THE EFFECS OF THE UNCERTAINTY ON THE SEISMIC PERFORMANCE OF STEEL FRAMES EQUIPPED WITH TUNED MASS DAMPER A. Kayhani, R. Drabanian, V. Mohsenian and R. Naderi
- 51 EFFECTS OF ADDING SILICA BASED PARTICLES WITH DIFFERENT SPECIFIC SURFACE AREAS ON THE SHEARING STRENGTH PARAMETERS AND BEHAVIOR OF SOIL-CEMENT MATERIALS M. Tajdini, M. Hajialilue-Bonab, H. Katebi and S. Golmohammadi
- 63 CYCLIC BEHAVIOR OF STEEL PLATE SHEAR WALL CONNECTED TO FRAME BEAMS ONLY S.A.A. Hosseinzadeh, M.A. Barkhordari and A. kazemi
- OPTIMUM DESIGN OF SPECIAL R.C. SHEAR WALL WITH BOUNDARY ELEMENT S.R. Hoseini Vaez and H.R. Shahmoradi Qomi
- 87 THE PROPERTIES OF CONCRETE CONTAINING TERNARY CEMENT OF HIGH VOLUME TUFF AND SILICA FUME M.N. Norouzifar and H. Madani

## **RESEARCH NOTES:**

- 99 INVESTIGATION ABOUT SHEAR BEHAVIOR OF SAND REINFORCED WITH GEOTEXTILE WITH EMPHASIS ON SHEAR ZONE A. Lakirouhani, M. Bahrehdar and S. M. Hosseini
- 111 NUMERICAL SIMULATION OF SOLITARY WAVE RUN-UP ON THE BEACH BY A MESHLESS METHOD BASED ON EXPONENTIAL BASIS FUNCTIONS S,M. Zandi , A. Rafizadeh and A. Shanehsazzadeh
- 123 DROUGHT FREQUENCY ANALYSIS BASED ON DEVELOPMENT OF A TWO-VARIATE STANDARDIZED INDEX (RAINFALL-RUNOFF) S.A. Chavoshian, Gh. Nikravesh, N. Dehghanian and A. Nikravesh
- 133 EXPERIMENTAL STUDY ON THE EFFECT OF NANO SILICA PARTICLES ON CREEP BEHAVIOR OF SOFT CLAY SOIL A. Negahdar, A. Nouri and Sh. Yadegari
- 143 SUGGESTIONS TO REMOVE THE CONTINUITY PLATES OF BOX COLUMNS M.A. Kafi and P. Tarighi

APPENDIX

<sup>164</sup> ABSTRACTS OF PAPERS IN ENGLISH