Civil Engineering

Sharif

Winter 2019

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 theoretical? 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 APPLICATION OF STEEL PLATE SHEAR WALL AND TENSION-BRACING IN RETROFITTING OF STRUCTURES T. Mofid, Y. Hossein Zadeh and H.R. Tavakoli
- 13 SIZE EFFECTS FOOTING ON THE SEISMIC PERFORMANCE OF THE MID-RISE BUILDING CONSIDERING THE DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION AND COMPARED WITH CONE MODEL
 - J. Khazei, A. Amiri and M. Khalilpour
- 27 EVALUATING BEHAVIOR OF HIGH-RISE STRUCTURES EQUIPPED WITH IMPACT DAMPER UNDER NEAR- AND FAR-FIELD EARTHQUAKES

S.M. Zahrai and A. Heisami

- 37 EXPERIMENTAL EVALUATION OF HIGH-PERFORMANCE FIBER REINFORCED CEMENT COMPOSITES BEHAVIOR
 M.H. Saghafi, H. Shariatmadar and A. Kheyroddin
- 47 LABORATORY MODELING OF OIL CONTAMINATION PROPAGATION EFFECT ON SUBGRADE REACTION MODULUS OF FINE GRAINED SAND

I. Talebzadeh and A. Hajiani Boushrhian

- 55 SCALING OF GROUND MOTION RECORDS BASED ON THE NONLINEAR BEHAVIOR OF STRUCTURES
- 69 FINE-GRAINED INFLUENCE ON THE BEHAVIOR OF REINFORCED SAND WALLS UNDER SURCHARGE LOAD USING CENTRIFUGE H.R. Razeghi, R. Riahi and M.R. Gholamshahi
- 79 VULNERABILITY EVALUATION OF BURIED STEEL PIPELINES UNDER SEISMIC WAVE PROPAGATION
 V. Jahangiri and H. Shakib
- 91 AN OPTIMAL MESH GENERATION IN FINITE-ELEMENT BY CHARGED SYSTEM SEARCH ALGORITHM
 H. Arzani, M. Ghorbanzadeh and M. Fakori

RESEARCH NOTES:

- 101 ESTIMATING SHEAR STRENGTH OF RECTANGULAR SHORT REINFORCED CONCRETE COLUMNS USING GENETIC PROGRAMMING
 - S.B. Beheshti Aval and H. Ketabdari
- 111 NUMERICAL STUDY OF NEGATIVE SKIN FRICTION PHENOMENON ON TAPERED PILES IN COHESIVE SOILS
 H. Alielahi and M. Abdi Rad
- 119 DETERMINATION OF TOLERABLE DIFFERENTIAL SETTLEMENTS IN MOMENT-RESISTING STEEL FRAMES BASED ON PERFORMANCE LEVEL OF STRUCTURE
 - M. Gholami, A.R. Bagherieh, A. Mohebkhah and M. Moradi
- 131 A COMPARATIVE OVERVIEW OF THE MOST RELIABLE METHODS OF ESTIMATING THE LONG-TERM BEHAVIOR OF CONCRETE UNDER CONVENTIONAL ONE-STEP AND NONLINEAR SEQUENTIAL ANALYSIS
 - $\mathcal{M}.$ Jalilzadeh Afshari ,
A. Kheyroddin and $\mathcal{M}.$ Gholhaki
- 145 INVESTIGATING THE PRECISION OF QUANTITY TAKE-OFF IN BIM APPLICATIONS
 - $E.\ Shafaghat,\ H.\ Taghaddos\ and\ B.\ Sherafat$

APPENDIX

164 ABSTRACTS OF PAPERS IN ENGLISH