

ISSN: 2186-2982 (Print) 2186-2990 (Online)



Scopus

EBSCO



GIF
GLOBAL IMPACT FACTOR



VOLUME 14

Issue 41 & 42

January-February 2018

International Journal of GEOMATE

(Geotechnique, Construction Materials and Environment)



Tsu, Japan

THE GEOMATE INTERNATIONAL SOCIETY

<http://www.geomatejournal.com/>

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

International Journal of GEOMATE is Abstracted/Indexed in: SCOPUS, Web of Science Emerging Sources Citation Index (ESCI), EBSCO, Global Impact Factor (GIF), Gale (a Cengage Learning Company), ULRICHSWEB, Global Serials Directory, etc.

Impact Factor (by GIF): 2015: 1.009; 2014: 0.987; 2013: 0.825; 2012: 0.714

Paper acceptance rate: 2015: 35.28%; 2014: 37.5%; 2013: 38.71%; 2012: 46.66%; 2011: 61.53%

Honorary Editor

Prof. Dr. Shoji Inoue, Professor Emeritus, Mie University, Japan

Editor-in-Chief:

Prof. Dr. Zakaria Hossain, Mie University, Japan

Assistant to Editor-in-Chief:

Dr. Jim Shiau, University of Southern Queensland, Australia

Associate Editors:

Prof. Dr. Fumio Tatsuoka, Tokyo University of Science, Japan

Prof. Dr. Sai Vanapalli, University of Ottawa, Canada

Prof. Dr. Ian Jefferson, University of Birmingham, United Kingdom

Prof. Dr. Mounir Bouassida, National School of Engineering of Tunis

Prof. Dr. Bujang B.K. Huat, University Putra Malaysia, Malaysia

Prof. Dr. Nemy Banthia, University of British Columbia, Canada

Prof. Dr. Toshinori Sakai, Mie University, Japan

Prof. Dr. A.S.M. Abdul Awal, University Technology Malaysia, Malaysia

Prof. Dr. Jing-Cai Jiang, University of Tokushima, Japan

Prof. Dr. Lilia Robles Austriaco, Angles University Foundation, Philippines

Prof. Dr. Muhammad Ibn Ibrahimy, International Islamic University, Malaysia

Prof. Dr. Shamsul I. Chowdhury, Roosevelt University, USA

Prof. Dr. Isabel Pinto, University of Coimbra, Portugal

Prof. Dr. Kaneco Satoshi, Mie University, Japan

Prof. Dr. Mohammad Shariful Islam, BUET, Bangladesh

Prof. Dr. Mark Jaksa, University of Adelaide, Australia

Prof. Dr. Kingshuk Roy, Nihon University, Japan

Prof. Dr. Md. Shahin Hossain, Islamic University of Technology, Bangladesh

Prof. Dr. Ranjith Pathegama Gamage, Monash University, Australia

Prof. Dr. Pedro Arrua, Universidad Tecnológica Nacional, Argentina

Prof. Dr. Miguel A. Pando, University of North Carolina, USA

A full list of sub-editors and editorial assistants are given in the web page.

Copyright © 2017 by International Journal of GEOMATE

All rights reserved. In principle, no part of this publication or the information contained herein may be reproduced in any form or by any means, translated in any language, stored in any database or retrieval system, or transmitted in any form or by any means without prior permission in writing from the publisher.

Disclaimer: The editors and the publisher have tried their best effort to ensure integration and the quality of this publication and information herein. However, they give no warranty of any kind, expressed or implied with regard to the material contained in this journal, and will not be liable in any event for the consequences of its use.

Publisher: The GEOMATE International Society

Place of publication: Tsu city, Mie, Japan

Contact: Editor-in-Chief, Dr. Zakaria Hossain, Professor, Graduate School of Bioresources,

Mie University, 1577 Kurimamachiya, Tsu city, Mie 514-8507, Japan

E-mail: editor@geomatejournal.com, URL: <http://www.geomatejournal.com/>

Tel & Fax: +81-59-231-9578

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

Founded in 2011, *The "International Journal of GEOMATE"* is a Scientific Journal of the GEOMATE International Society that encompasses a broad area in Geotechnique, Construction Materials, and Environment. The key objective of this journal is to promote interdisciplinary research from various regions of the globe. The editorial board of the journal is comprised of extensively qualified researchers, academicians, scientists from Japan and other countries of the world. It is a peer-reviewed journal that is published quarterly. All articles published in this journal are available online. Contributors may download the manuscript preparation template for submitting paper or contact to the Editors-in-Chief [editor@geomatejournal.com].

Aims and Scopes:

The journal aims to become an efficient mean of publishing and distributing high-quality information from the researchers, scientists, and engineers. The main scopes are as follows:

- Advances in Composite Materials
- Computational Mechanics
- Foundation and Retaining Walls
- Slope Stability
- Soil Dynamics
- Soil-Structure Interaction
- Pavement Technology
- Tunnels and Anchors
- Site Investigation and Rehabilitation
- Ecology and Land Development
- Water Resources Planning
- Environmental Management
- Earthquake and Tsunami Issues
- Safety and Reliability
- Geo-Hazard Mitigation
- Case History and Practical Experience
- Others

Review Policy:

- The paper which meets the editorial criteria will be assigned to at least two anonymous reviewers for peer-review.
- Authors may recommend some reviewers - however, Editors are entitled to consider them or not.
- The Editorial Board consists of an outstanding group that is responsible for the review process of the submitted manuscripts and will guarantee the quality of the publication.
- The manuscript will be published as soon as it is accepted and all the modifications recommended by the reviewers are made.
- The review procedure is as strict as in the most prestigious journals, but publication time is minimized.
- Based on the reviewers' comments, the Editors will make a decision on a paper as one of the following four conditions:
 1. Accept without revision
 2. Accept with minor revision
 3. Encourage to resubmit with major revision
 4. Reject

In case of acceptance with either minor or major revisions, the authors will be advised to revise the manuscript according to the reviewers' comments.

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

Instruction to Author:

The manuscript to be submitted should be prepared using the manuscripts submission template. Download the manuscript formatting template from download files menu. The manuscript to be submitted adheres to the rules and guidelines given in manuscript template. The manuscript should be written in English. List of references must be translated into English if other languages (both should be written). The page limit is 8 pages for ordinary manuscript and 10 pages for the invited manuscript. The references inside the text and in the bibliographic list should follow the formats as per the manuscript template. All figures, graphs, and tables must follow the font-style of the text. Ensure clear and good quality picture in the first submission. Selected manuscript from "GEOMATE Conference Presentation" will be reprinted in the journal with nominal charges (40% discount of regular fees) based on the agreement of the authors. Accepted papers which were not presented in "GEOMATE Conference" need publication charges of 800 USD as regular fees. Any page or fraction thereof exceeding page limit will be charged 100 USD per page. Extra author fee is 100 USD/author if exceeding 5 authors. This is required for its maintenance such as managing article submission and peer review, typesetting, tagging and indexing of articles, hosting articles on dedicated servers, supporting sales and marketing costs to ensure global dissemination via different databases, and permanently preserving the published journal article. Copyright: GEOMATE required to obtain copyright of papers from authors for the term of copyright by signing and returning the publishing agreement.

Submission Method:

Submit full manuscript online using "Submission" menu. We accept online submission only. Copyright release form to be e-mailed separately along with the manuscript submission. Download it from the "Download Files Menu". Abolition of printed version: Considering environmental conservation, the paper version has been discontinued since June 2016. For any questions: Contact us [editor@geomatejournal.com].

Membership Fees: Regular Member 100USD/year; Life Member 900USD only.

Membership Benefits:

- Receive Membership ID/Card
- Use M.G. or L.M.G. after your name (M=Member, G=Geomate, L=Life)
- Be involved in GEOMATE technical committees and activities
- Be up-to-date on the current development in the field
- Priority right to participate in international conferences with 20% discount
- 20% discount for Journal paper publication
- Vote in the election of GEOMATE officers
- Access to the Journal webpage

Membership Application (send the related items below using online form):

- Full Name:
- Title/Position (check one): Prof. A/Prof. Dr. Mr. Ms.
- Membership Category (check one): Regular Member Life Member Others
- Address:
- Tel & Fax:
- E-mail (co-authors email separated by comma):
- Research Area (check one): Geotechnique Construction Materials Environment Others

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

STATEMENT ON PUBLICATION ETHICS AND PUBLICATION MALPRACTICE (1/2)

The International Journal of GEOMATE is a double-blind peer-reviewed journal. All parties involved in the act of publishing an article for this journal, i.e.: the editors, the author, the peer-reviewers and the publisher must follow the ethical behavior indicated in the COPE's Best Practice Guidelines for Journal Editors. In order to warrant high-quality scientific publications, public trust in scientific findings, and that people receive credit for their ideas, the ethical standards for publication are followed.

DUTIES OF EDITORS

A decision on the Publication of Article: Based on the double-blind peer review of a paper, the Chief Editor and the Associate Editor are responsible for deciding which of the articles accepted for publication. Neither the Chief Editor nor the Associate Editor has the authority to influence the reviewers who are conducting the blind review of the articles submitted for peer review. The Chief Editor and the Associate Editor may be guided by the policies of the journal's Editorial Board and subjected to such legal requirements regarding libel, copyright infringement, and plagiarism.

Honest Play: Manuscripts submitted to GEOMATE shall be exclusively evaluated based mainly on their intellectual quality and significance. GEOMATE will not give any consideration to authors' race, gender, sexual orientation, religious beliefs, ethnic origin, citizenship, or political philosophy.

Confidentiality: The Chief Editor, the Associate Editor, and any editorial staff must not disclose any information about a submitted manuscript to anyone other than the corresponding author, reviewers, potential reviewers, other editorial advisers, and the publisher.

Disclosure and Conflicts of Interest: Unpublished materials disclosed in a submitted manuscript must not be used by anyone who has a view of the manuscript (while handling it) in his or her own research without the express written consent of the author.

DUTIES OF REVIEWERS

The contribution of Double-Blind Peer Review: Any identifying information will be stripped out from the submitted paper so that the reviewers do not know any information about the authors and vice versa i.e.: reviewers' comments to the editors are confidential and before passing on to the authors, it will be made anonymous. The Double Blind Peer review assists the reviewers in making editorial decisions, while editorial communications with the author may also assist the author in improving the manuscript. The names of the reviewers known only to the Chief Editor and the Associate Editor and it remains strictly confidential to authors.

Punctuality: Any selected referee who feels unqualified to review the assigned manuscript or unable to provide a prompt review should notify the Chief Editor and the Associate Editor and excuse himself/herself from the review process.

Confidentiality: Private information or ideas obtained through double-blind peer review must be kept confidential and not used for personal advantage. Manuscripts received for review must be treated as confidential documents. Without any authorization by the Chief Editor and the Associate Editor, the information of the submitted manuscript must not be shown to or discussed with, others.

Standards of Objectivity: There shall be no personal criticism of the author. Reviewers should express their views clearly with supporting arguments and reviews should be conducted objectively.

Acknowledgment of Sources: Authors should cite relevant references and corresponding citation if any statement in the submitted paper had been previously published or reported elsewhere. Reviewers should identify relevant published work that has not been cited by the authors. If a reviewer finds any substantial similarity or overlap between the submitted manuscript and any other published works, s/he should inform the Chief Editor/Associate Editors.

Conflict of Interest: In any reviewers find that the submitted manuscript has conflicts of interest resulting from competitive, collaborative, or other relationships or connections with any of the authors, companies, or institutions, s/he should not review that manuscripts and notify to the Chief Editor/Associate Editors prompt.

DUTIES OF AUTHORS

Reporting Standards: Authors of papers of original research should present an accurate account of the work performed as well as an objective discussion of its significance. Underlying data should be represented accurately in the paper. A manuscript should contain sufficient detail and references to permit others to replicate the work. Fraudulent or knowingly inaccurate statements constitute unethical behavior and are unacceptable.

Data Access and Retention: Authors may be asked to provide the raw data in connection with a paper for editorial review, and should be prepared to provide such data for public access or for access to the readers of the journal.

Originality and Plagiarism: The authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others, this must be appropriately cited or quoted. All papers published by International Journal of GEOMATE are committed to publishing only original material, i.e., material that has neither been published elsewhere nor is under review elsewhere. The paper that is found to have been plagiarized from a manuscript by other authors, whether published or unpublished, will incur plagiarism sanctions.

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

STATEMENT ON PUBLICATION ETHICS AND PUBLICATION MALPRACTICE (2/2)

Acknowledgment of Sources: Proper acknowledgment of the work of others must always be given. Authors should cite publications that have been influential in determining the nature of the reported work.

Manipulation of Citations: Submitted papers that are found to include citations whose primary purpose is to increase the number of citations to a given author's work, or to articles published in a particular journal, will incur sanctions for manipulation of citations.

Falsification and Fabrication: Submitted papers that are found to have either falsified or fabricated numerical/experimental results, including the manipulation of images, will incur data fabrication and falsification sanctions.

Authorship: The authorship of a paper should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors.

Scientific Contribution: All listed authors must have made a significant scientific contribution to the research in the manuscript and approved all its claims. It is important to list everyone who made a significant scientific contribution, including students and laboratory technicians.

Corresponding Author: Corresponding Author is the author responsible for communicating with the journal for publication. The corresponding author should ensure that all appropriate co-authors and no inappropriate co-authors are included on the paper and that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication.

Acknowledgment of Funding Sources: Funding sources for the research reported in the manuscript should be duly acknowledged after the conclusion and before the list of references.

Disclosure and Conflicts of Interest: All sources of financial support for the project or any substantive conflict of interest that might be interpreted to influence the results of the paper should be disclosed.

Fundamental Errors in Published Works: It is the author's responsibility to promptly notify the Chief Editor/Associate Editor if s/he discovers a significant error or inaccuracy in his/her own published work to retract or correct the paper.

Redundant, Concurrent or Multiple Publications: An author should not, in general, publish manuscripts describing essentially the same research in more than one journal or primary publication. Manuscripts that are found to have been published elsewhere, or to be under review elsewhere, will incur duplicate submission/publication sanctions. If authors have used their own previously published work or work that is currently under review, as the basis for a submitted manuscript, they are required to cite the previous work and indicate how their submitted manuscript offers novel contributions beyond those of the previous work. Submitting the same manuscript to more than one journal concurrently constitutes unethical publishing behavior and is unacceptable. Redundant publications involve the inappropriate division of study outcomes into several articles.

SANCTIONS

In the event that there are documented violations of any of the above-mentioned policies in any journal, regardless of whether or not the violations occurred in a journal published by GEOMATE, the following sanctions will be applied:

- Immediate rejection of the infringing manuscript.
- Immediate rejection of every other manuscript submitted to GEOMATE by any of the authors of the infringing manuscript.
- The prohibition against all of the authors for any new submissions to GEOMATE, either individually or in combination with other authors of the infringing manuscript, as well as in combination with any other authors. This prohibition will be imposed for a minimum of five years.
- Prohibition against all of the authors from serving on the Editorial Board of the International Journal of GEOMATE

In cases where the violations of the above policies are found to be particularly outrageous, the publisher reserves the right to impose additional sanctions beyond those described above.

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

Volume 14, Issues 41

SEISMIC RISK EVALUATION OF IRRIGATION TANKS: A CASE STUDY IN IBIGAWA-CHO, GIFU PREFECTURE, JAPAN Chen Fang, Hideyoshi Shimizu, Shin-Ichi Nishimura, Ken Hiramatsu and Takeo Onishi	1-6
ENHANCEMENT OF MICROBIALLY INDUCED CARBONATE PRECIPITATION USING ORGANIC BIOPOLYMER Thiloththama Hiranya Kumari Nawarathna, Kazunori Nakashima and Satoru Kawasaki	7-12
FUEL TANK FOUNDATION IMPROVEMENT SYSTEM ON SOFT SOIL LAYER BASED ON 3D NUMERICAL SIMULATION Adhitya Yoga Purnama, Ahmad Rifa'i and Hary Christady Hardiyatmo	13-18
STABILITY CHARTS FOR UNSUPPORTED PLANE STRAIN TUNNEL HEADINGS IN HOMOGENEOUS UNDRAINED CLAY Jim Shiau, Mathew Sams, Fadhil Al-Asadi and Mohammad Mirza Hassan	19-26
JACK-ASSISTED LEVELING PROCESS OF AN ACTUAL 17-STORY BUILDING Juan F. Correal, Juan C. Reyes, Juan S. Echeverry, Andres C. Riaño, Armando Palomino, Álvaro Peláez and Gustavo Gastelbondo	27-34
STATE OF THE ART, RECONSTRUCTION OF DAMAGED ZONES: TRANSITORY STRESSES EFFECT AND FACTORS CONTROLLING ROCK MASS STABILITY A. K. Alzo'ubi	35-43
PROPERTIES OF COATED AND UNCOATED BIOMASS AGGREGATES AND THEIR EFFECTS ON THE STRENGTH AND WATER PERMEABILITY OF PERVIOUS GEOPOLYMER CONCRETE S.A. Arafa, A.Z.B. Mohd Ali, A.S.M. Abdul Awal, Shamrul-Mar Shamsuddin and M. Zakaria Hossain	44-51
IMPLICATIONS OF LAND SUBSIDENCE DUE TO GROUNDWATER OVER-PUMPING: MONITORING METHODOLOGY USING GRACE DATA Mohamed Saber, Mohammed Abdel-Fattah, Sameh A. Kantoush and Tetsuya Sumi	52-59
THE EFFECT OF GRAVITY MEASUREMENT DISTRIBUTION POINTS ON INTERPRETATION OF GRAVITY DATA IN THE GUNUNG ENDUT GEOTHERMAL PROSPECT AREA, INDONESIA Supriyanto, Rokhmatuloh, Robi Sobirin and Edi Suhanto	60-67
ENHANCEMENT OF RECYCLED AGGREGATE CONCRETE PROPERTIES BY A NEW TREATMENT METHOD Ngoc Kien Bui, Tomoaki Satomi and Hiroshi Takahashi	68-76
UNIAXIAL COMPRESSIVE STRESS-STRAIN BEHAVIOR OF SELF-COMPACTING CONCRETE WITH HIGH-VOLUME FLY ASH Stefanus A Kristiawan, Agus Setiya Budi and Andreas Nur Hadi	77-85
RESEARCH ON CAUSE OF DAM FAILURE FROM VIEWPOINT OF HYDRAULIC FRACTURING – CASE STUDY OF A DAM FAILURE IN VIETNAM Duy Quan Tran, Shinichi Nishimura, Masateru Senge and Tatsuro Nishiyama	86-94
LITTERING BEHAVIOR ANALYSIS BASED ON SURVEY AND QUESTIONNAIRE ABOUT LITTERING IN THE NAGASE RIVER Haruki Shimazu	95-101
ANALYSIS OF THE UNDRAINED SHEAR STRENGTH THROUGH THE STANDARD PENETRATION TEST WITH TORQUE (SPT-T) J.C. Ruge, C.C. Mendoza, J.E. Colmenares, R.P. Cunha and I.F. Otalvaro	102-110

INTERNATIONAL JOURNAL OF GEOMATE
(Geotechnique, Construction Materials & Environment)
ISSN: 2186-2982(Print), 2186-2990(Online)

Volume 14, Issues 41

FAULT ANALYSIS IN POHGAIH VILLAGE, BLITAR, INDONESIA USING RESISTIVITY METHOD FOR HAZARD RISK REDUCTION Adi Susilo, Sunaryo, Fina Fitriah and Sarjiyana	111-118
GROUNDWATER FLOW MODELING IN THE WATES COASTAL AQUIFER, KULON PROGO DISTRICT, YOGYAKARTA SPECIAL PROVINCE, INDONESIA Wahyu Wilopo, Doni Prakasa Eka Putra and Dimas Aryo Wibowo	119-125
MECHANICAL AND CHEMICAL CHARACTERISATION OF POZZOLAN OF MIDDELE ATLAS IN MOROCCO Azeddine Bouyahyaoui, Moha Cherkaoui, Larbi Abidi and Toufik Cherradi	126-134
EFFECTS OF CHLORIDE CONTENT ON THERMAL PROPERTIES OF CONCRETE David Im, Pakawat Sancharoen, Parnthep Julnipitawong and Somnuk Tangtermsirikul	135-142
THE EFFECTS OF MAGNESIUM HYDROXIDE FOR THE MICROBIAL COMMUNITY IN THE SEDIMENTS OF A EUTROPHIC CLOSED BAY Dong Xia, Kunihiro Okano, Yukiko Miura, Katsumi Okada, Kunio Watanabe, Rameshprabu Ramaraj and Tomoaki Itayama	143-150
THE IMPACT OF EARTHQUAKES OF TUNNEL LININGS: A CASE STUDY FROM THE HANOI METRO SYSTEM Gospodarikov Alexandr and Thanh Nguyen Chi	151-158
USING PERMEABLE PAVEMENTS TO REDUCE THE ENVIRONMENTAL IMPACTS OF URBANISATION Oriana Sanicola, Terry Lucke and Jo Devine	159-166
ON-SITE VERIFICATION OF REAL-TIME CHECKING SYSTEM FOR IMPROVED RANGE BY HIGH-PRESSURE INJECTING GROUND IMPROVEMENT Hiroyuki Hashida, Shinya Inazumi, Tadashi Chuman and Ikuya Okamoto	167-172
IMPACT OF LAND LEVELING ON THE WATER BALANCE FOR AGRICULTURE IN EASTERN AFGHANISTAN Shakerullah Hashimi, Najumuddin Anjum, Pervaiz Ahmad Naseri and Takamitsu Kajisa	173-180
AN INNOVATIVE SANITARY LANDFILL SYSTEM WITH DREDGED MARINE SOILS (DMS) AS LINER MATERIAL: GEO-ENVIRONMENTAL STUDIES Nurasiah Mira Anuar, Chee-Ming Chan and Siti Farhanah S.M. Johan3	181-185
EVALUATING THE STATIC AND DYNAMIC MODULUS OF ELASTICITY OF ROLLER COMPACTED RUBBERCRETE USING RESPONSE SURFACE METHODOLOGY Bashar S Mohammed, Musa Adamu and Mohd Shahir Liew	186-192
SUITABILITY EVALUATION OF SPACE UTILIZATION BASED ON ENVIROMENTAL SUSTAINABILITY AT THE COASTAL AREA OF BUNGUS BAY IN PADANG CITY, INDONESIA Dedi Hermon and Aprizon Putraand Olivia Oktorie	193-202

INTERNATIONAL JOURNAL OF GEOMATE

(Geotechnique, Construction Materials & Environment)

ISSN: 2186-2982(Print), 2186-2990(Online)

Volume 14, Issues 42

INFLUENCE OF MATRIC SUCTION ON INSTABILITY OF UNSATURATED SILTY SOIL IN UNCONFINED CONDITIONS Ali Murtaza Rasool and Jiro Kuwano	1-7
GEOTECHNICAL PROPERTIES OF RAW AND PROCESSED BAUXITE FROM BUKIT GOH, KUANTAN, PAHANG; IN ACCORDANCE WITH IMSBC CODE Muzamir Hasan, Ahmad Amirul Faez, M. Azizul Moqsud, Tam Weng Long and Phang Biao Yu	8-13
TOXICITY AND BIOEFFICACY OF WEED ESSENTIAL OILS AGAINST COWPEA BRUCHIDS AND THEIR EFFECT ON MUNGBEAN SEEDS Ruchuon Wanna and Perayos Khangkhun	14-19
SAFETY AND EFFICIENCY FOR WEEDING WORK AND LEVEE SLOPE'S FORM REQUIRED FOR MOWING MACHINES ON PADDY FIELDS IN STEEP SLOPING AREAS IN JAPAN Yoshiyuki Uchikawa, Masami Matsui, Teruo Arase and Takahiro Tamura	20-24
OPTIMAL RESTORATION STRATEGY OF A WATER PIPELINE NETWORK IN SURIGAO CITY, PHILIPPINES Agnes Garciano, Lessandro Estelito Garciano, Renan Ma. Tanhueco and Taze Jared Abubo	25-29
AN INVESTIGATION ON THE STRENGTH OF AXIALLY LOADED COLD-FORMED STEEL Z-SECTIONS James Matthew L. De Jesus and Bernardo A. Lejano	30-36
INVESTIGATION OF THE EFFECTS OF DIFFERENT NATURAL FIBERS ON THE STRENGTH OF COMPRESSED STABILIZED EARTH BLOCKS (CSEB) Bernardo A. Lejano and Kyle Solomon D. Pineda	37-43
REVIEWS ON THE APPLICABILITY OF CONSTRUCTION AND DEMOLITION WASTE AS LOW-COST ADSORBENTS TO REMOVE-HEAVY METALS IN WASTEWATER G.M.P. Kumara, Takashi Saito, Shingo Asamoto and Ken Kawamoto	44-51
SHEAR BOND STRENGTH OF FA-PC GEOPOYLMER UNDER DIFFERENT SAND TO BINDER RATIOS AND SODIUM HYDROXIDE CONCENTRATIONS Tanakorn Phoo-ngernkham, Sakonwan Hanjitsuwan, Satakhun Detphan, Jaksada Thumrongvut, Cherdasak Suksiripattanapong, Nattapong Damrongwiriyanupap, Prinya Chindaprasirt and Shigemitsu Hatanaka	52-57
INFLUENCE OF SEAWATER ON THE STRENGTH OF RC BEAMS AND CORROSION BEHAVIOR OF STEEL Bernardo A. Lejano and Cheryl Lyne C. Roxas	58-64
OPTIMUM USE OF GEOGRID IN THE UNBOUND GRANULAR LAYER FOR THE PAVEMENT CONSTRUCTION Aung Aung Soe, Jiro Kuwano, Ilyas Akram and Takaya Kogure	65-70
EXPERIMENTAL STUDY ON MECHANICAL BEHAVIOUR OF CONCRETE BEAMS WITH SHREDDED PLASTICS Richard M. De Jesus, Emmanuel Bastian Pelaez and Moises Carll Cañeca	71-75
NON-LINEAR APPROACHES TO THE RESPONSE OF BRICK MASONRY WALL TO LATERAL LOADING Miroslav Mynarz and Lucie Mynarzova	76-82
MACROCELL CORROSION ASSESSMENT OF STEEL IN COLD-JOINTED CONCRETE MIXED AND CURED IN SEAWATER Cheryl Lyne C. Roxas and Bernardo A. Lejano	83-89

INTERNATIONAL JOURNAL OF GEOMATE
(Geotechnique, Construction Materials & Environment)
ISSN: 2186-2982(Print), 2186-2990(Online)

Volume 14, Issues 42

A REVISIT TONICOLL HIGHWAY EXCAVATION IN SINGAPORE Samal Hama Salih, Mohammad Mirza Hassan, Jim Shiau and Zakaria Hossain	90-96
UTILIZATION OF POLYPROPYLENE TO SUBSTITUTE BITUMEN FOR ASPHALT CONCRETE WEARING COURSE (AC-WC) Emenda Sembiring, Harmein Rahman and Yoanne Maretha Siswaya	97-102
IDENTIFICATION OF POTENTIAL SITES FOR HARVESTING TIDAL CURRENT POWER IN KELIAN CAPE, KELABAT BAY, AND LARANTUKA STRAIT Harman Ajiwibowo, Kanisius S. Lodiwa, Munawir B. Pratama and Andoyo Wurjanto	103-111
THE EFFECT OF MATRIC SUCTION ON THE SHEAR STRENGTH OF UNSATURATED SANDY CLAY Heni Pujiastuti, Ahmad Rifa'i, Agus Darmawan Adi and Teuku Faisal Fathani	112-119
CHARACTERISTICS OF POLYCYCLIC AROMATIC HYDROCARBON FORMATION DURING SMOKING Haruki Shimazu, Tsuyoshi Yata and Naoto Ozaki	120-127
INVESTIGATION INTO POTENTIAL OF FLY ASH OBTAINED FROM COAL-BASED POWER PLANTS TO CONTRIBUTE TO SUSTAINABLE ENVIRONMENT M.S.A.M. Anik, M.R. Islam, M.A. Iqbal, K.M.S. Quader	128-133
DISTRIBUTED MODEL OF HYDROLOGICAL AND SEDIMENT TRANSPORT PROCESS IN MEKONG RIVER BASIN Zuliziana Suif, Chihiro Yoshimura, Nordila Ahmad and Sengheng Hul	134-139
EVALUATION OF PIER-SCOUR PREDICTIONS FOR WIDE PIERS USING FIELD DATA Nordila Ahmad, Bruce W. Melville, Thamer Mohammad and Zuliziana Suif	140-145
A BASIC STUDY ON FLUID PREDICTION OF MORTAR WITH VARIOUS POWDERS Yuki Takagi, Koji Takasu, Hidehiro Koyamada and Hiroki Suyama	146-150
CHARACTERIZATION OF CERIUM OXIDE-CHITOSAN NANOCOMPOSITE–MODIFIED SCREEN PRINTED CARBON ELECTRODE AND APPLICATION IN MELATONIN DETERMINATION Pachanuporn Sunon, Porntip Wongkaew, Jeffrey Johns and Nutjaree Johns	151-157
EVALUATION OF ATTENUATION OF ULTRASONIC WAVE IN AIR TO MEASURE CONCRETE ROUGHNESS USING AERIAL ULTRASONIC SENSOR Download Article Seiya Nagaoka, Islam Mohammad Raihanul, Kenji Okajima, Ryoei Ito, Ken Watanabe and Tetsu Ito	158-163
IMPACT OF AGRICULTURAL WATER ALLOCATION ON THE ECOSYSTEMS IN THE INNER NIGER RIVER DELTA Download Article Barry Kassambara, Homayoon Ganji and Takamitsu Kajisa	164-170