



Editor

Aida Bulucea

Associate Editors

Kerim Koçak

Klimis Ntalianis



Recent Advances in Earth Sciences, Environment and Development

- *Proceedings of the 9th International Conference on Water Resources, Hydraulics & Hydrology (WHH '15)*
- *Proceedings of the 8th International Conference on Engineering Mechanics, Structures, Engineering Geology (EMESEG '15)*
- *Proceedings of the 4th International Conference on Sustainable Tourism and Cultural Heritage (STACH '15)*
- *Proceedings of the 1st International Conference on Mineralogy, Magmatism and Metamorphism (MIMAM '15)*

Konya, Turkey, May 20-22, 2015

Scientific Sponsor



Selcuk University
Konya, Turkey



RECENT ADVANCES in EARTH SCIENCES, ENVIRONMENT and DEVELOPMENT

**Proceedings of the 9th International Conference on Water Resources,
Hydraulics & Hydrology (WHH '15)**

**Proceedings of the 8th International Conference on Engineering Mechanics,
Structures, Engineering Geology (EMESEG '15)**

**Proceedings of the 4th International Conference on Sustainable Tourism and
Cultural Heritage (STACH '15)**

**Proceedings of the 1st International Conference on Mineralogy, Magmatism
and Metamorphism (MIMAM '15)**

**Konya, Turkey
May 20-22, 2015**

Scientific Sponsors



**Selcuk University
Turkey**

RECENT ADVANCES in EARTH SCIENCES, ENVIRONMENT and DEVELOPMENT

Proceedings of the 9th International Conference on Water Resources, Hydraulics & Hydrology (WHH '15)

Proceedings of the 8th International Conference on Engineering Mechanics, Structures, Engineering Geology (EMESEG '15)

Proceedings of the 4th International Conference on Sustainable Tourism and Cultural Heritage (STACH '15)

Proceedings of the 1st International Conference on Mineralogy, Magmatism and Metamorphism (MIMAM '15)

Konya, Turkey

May 20-22, 2015

Published by WSEAS Press

www.wseas.org

Copyright © 2015, by WSEAS Press

All the copyright of the present book belongs to the World Scientific and Engineering Academy and Society Press. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the Editor of World Scientific and Engineering Academy and Society Press.

All papers of the present volume were peer reviewed by no less than two independent reviewers. Acceptance was granted when both reviewers' recommendations were positive.

ISSN: 2227-4359

ISBN: 978-1-61804-309-2

RECENT ADVANCES in EARTH SCIENCES, ENVIRONMENT and DEVELOPMENT

**Proceedings of the 9th International Conference on Water Resources,
Hydraulics & Hydrology (WHH '15)**

**Proceedings of the 8th International Conference on Engineering Mechanics,
Structures, Engineering Geology (EMESEG '15)**

**Proceedings of the 4th International Conference on Sustainable Tourism and
Cultural Heritage (STACH '15)**

**Proceedings of the 1st International Conference on Mineralogy, Magmatism
and Metamorphism (MIMAM '15)**

**Konya, Turkey
May 20-22, 2015**

Editor:

Prof. Aida Bulucea, University of Craiova, Romania

Associate Editors:

Prof. Dr. Kerim Kocak, Selcuk University, Konya, Turkey

Prof. Klimis Ntalianis, Technological Educational Institute of Athens, Greece

Committee Members-Reviewers:

Francisco Diniz	Mohamed Mohamed Bizanti
Jose Manuel Mesa Fernandez	Daniela Cristina Momete
Maria De Fatima Nunes De Carvalho	Rajveer Mittal
Davorin Kralj	Dumitru-Alexandru Bodislav
Krisztina Uzuneanu	Mohamed Zahran
Jose Nunes	Jose A. Orosa
Vasile Zotic	Mario Cesar do Espirito Santo Ramos
Zohreh Salavatizadeh	Maria Bostenaru Dan
Sara Sadrzadehrafiee	Usama Awan
Dragos Ilie	Vitale Cardone
Saeid Eslamian	Leonardo Cascini
Kannan Subramanian	Domenico Guida
Grabara Janusz	Joseph Quartieri
Corina Carranca	Stefano Riemma
Mihaela Dudita	Gianfranco Rizzo
Heimo Walter	Mario Vento
Feridoun Nahidi Azar	Yong Ding
Suzana Yusup	Manijeh Razeghi
Monica Dumitrescu	Igor Sevostianov
Khaled Galal Ahmed	Daolun Chen
Ramin Khodafarin	Chun-Hway Hsueh
Petr Mastny	Yoshihiro Tomita
Harry Coomar Shumsher Rughooputh	Luigi Nicolais
Cristina Matos	Peter Chang
Giri Kattel	Rui Vilar
Tejinder Saggi	Yuanhua Lin
Ahadollah Azami	Jing Zhang
Pablo Fdez-Arroyabe	Mohd Sapuan Salit
Rodica Badescu	Jun Zhang
Denizar Cruz Martins	Cheng-Xian (Charlie) Lin
Najib Altawell	Kumar Tamma
Yang Zhang	Pradip Majumdar
Cristina Barbu	M. Affan Badar
Mehdi Seyyed Almasi	Olga Martin
Ali Dashti Shafiei	Anastasios Lyrantzis
Karim Shirazi	Cho W. Solomon To
Oprita Razvan	Harris Catrakis
Roman Mihai Daniel	Gongnan Xie
Francesco Rotondo	Seung-Bok Choi
Alena Bumbova	Jianqiao Ye
Reza Fathipour	Jan Awrejcewicz
Arvind Dhingra	Yury A. Rossikhin
Ali Salehipour	Jia-Jang Wu
Mueen Uddin Awan	Giuseppe Carbone
Arion Felix	Kim Choon Ng
Valeriy Perminov	Marina Shitikova
Catalin Croitoru	Ahmet Selim Dalkilic
Petr Hajek	Bruno Capaccioni
Claudio Guarnaccia	Milivoje M. Kostic
Berrichi Faouzi	Ernst D. Schmitter

Hing-Ho Tsang
Paolo Budetta
Rui Pedro Juliao
S. V. Dinesh
Efthimios Karymbalis

Table of Contents

The Influence of Oil Development on Water Quality of Agan River in West Siberia	9
<i>Dmitry Moskovchenko, Alexey Babushkin</i>	
The Possibilities of Modeling of Reinforced Masonry and its Comparison with Experiments	15
<i>Marie Kozielova, Martina Janulikova, Pavlina Mateckova, Lucie Mynarzova</i>	
The Study of Caspian Sea Salt Water Intrusion to Aquifer of Ghaem Shahr Plain	21
<i>Homayoun Moghimi, Kerim Koçak, Esfandiyyar Abbas Novinpour</i>	
Comparative Analysis on the Legal Protection of National Historical Monuments	28
<i>Florin Fainisi, Victor Al. Fainisi</i>	
Comparison of the Results from Analysis of Linear Inhomogeneous and Nonlinear Half-Space in Foundation-Subsoil Interaction	36
<i>Jana Labudkova, Radim Cajka</i>	
Water Sensitive Agricultural Development Oriented Preliminary Studies in Cihanbeyli (Konya) County	42
<i>Ayla Bozdağ, Fadim Yavuz</i>	
Reflection on Ingroup and Outgroup on Shakespeare's Works	48
<i>Farideh Alizadeh, Mohd Nasir Hashim, Rahmat Amini</i>	
Preliminary Geochemical Data on the Neogene Post-Collisional Volcanic Rocks in the Yükselen Area, NW Konya, Turkey	52
<i>Gülén Gençoğlu Korkmaz, Hüseyin Kurt, Kürşad Asan</i>	
Subsidence Observation of Experimental Post-Tensioned Concrete Industrial Floor Model in the Course of Static Load Test	58
<i>Petr Mynarcik, Radim Cajka</i>	
Soil Gas Radon (222Rn) Escaping Spots Along an Active Fault Zone in Konya City Center, Turkey	63
<i>Fikret Tufekcioglu, Veysel Zedef, Mehmet Erdogan, Kerim Kocak, Cem Sensogut</i>	
Synthesis of Geopolymer Cement Using Natural Resources for Green Construction Materials	71
<i>Mazen Alshaaer, Jumaa Alkafawein, Yasair Al-Fayez, Tarek Fahmy, Arwa Hamaideh</i>	
The Influence of Electronic Heating of Sliding Joint into Foundation Structures	76
<i>Martina Janulikova, Petr Mynarcik, Marie Kozielova</i>	
Using of Tuffs Instead of Omega Blocks in the Sealed Mines	80
<i>Gülnaz Daloğlu</i>	
Modeling and Analysis of General Reservoir Operation Problems by Using the Causal Feedback Loop Diagram of System Dynamics	85
<i>Chiu-Sung Lin, Chao-Chung Yang, Chao-Hsien Yeh, Liang-Cheng Chang</i>	

Geology and Hydrogeological Studies Around Hüyük-İmrenler-Köşk (Beyşehir-Konya), Turkey	95
<i>Güler Göçmez, Duygu Yazıcıoğlu</i>	
Utilization of Historical City for Sustainable Tourism: A Case Study of Floating Market in Thailand	98
<i>Chaweewan Denpaiboon</i>	
Petrography, Geochemistry and Metamorphism Characteristics of the Middle Nappe (Sugözü Melange) Observed in the Alanya Unit Metamorphites (Alanya, Antalya, Turkey)	104
<i>Gürsel Kansun, Şuayıp Küpel, Halil Baş</i>	
Natural Convection Heat Transfer Enhancement from an Isothermal Array of Circular Cylinders Under Horizontal Vibrations	108
<i>A. Shams Taleghani, S. Abdolahi, A. Falahian</i>	
Preparation of Functionally Graded Mullite-Zirconia Composite Using Electrophoretic Deposition (EPD)	116
<i>Henk S. C. Metselaar, Ahmed S. Mahdi, Zaid A. Sabre</i>	
Comparison of Interpolation Techniques for Mapping the Precipitation Maps of Central Anatolia Region	122
<i>Ismail Bulent Gundogdu</i>	
Cradle to Cradle Concept for Built Cultural Heritage Protection	127
<i>Liudmila Cazacova</i>	
The Effects of Freeze-Thaw Cycles on Pyroclastic Rocks Used in Gümüşler Monastery, Niğde, Turkey	135
<i>İsmail İnce, Mustafa Fener, M. Vehbi Gökçe</i>	
Tertiary Treatment of Secondary Effluents by Coagulation- Ultrafiltration Comparative Study Between Two Coagulants Used: The Ferric Chloride and the Alum	140
<i>Mazari Lilia, Abdessemed Djamel</i>	
Reactive Power Optimization of Power System Based on Niching Differential Evolution Algorithm	147
<i>Duan Jiao Li, Li Hua Yuan, Cheng Min Wang</i>	
Authors Index	154

Authors Index

Abdolah, S.	108	Kansun, G.	104
Al-Fayez, Y.	71	Koçak, K.	21, 63
Alizadeh, F.	48	Korkmaz, G. G.	52
Alkafawein, J.	71	Kozielova, M.	15, 76
Alshaaer, M.	71	Küpel, S.	104
Amini, R.	48	Kurt, H.	52
Asan, K.	52	Labudkova, J.	36
Babushkin, A.	9	Li, D. J.	147
Baş, H.	104	Lilia, M.	140
Bozdağ, A.	42	Lin, C.-S.	85
Cajka, R.	36, 58	Mahdi, A. S.	116
Cazacova, L.	127	Mateckova, P.	15
Chang, L.-C.	85	Metselaar, H. S. C.	116
Daloğlu, G.	80	Moghimi, H.	21
Denpaiboon, C.	98	Moskovchenko, D.	9
Djamal, A.	140	Mynarcik, P.	58, 76
Erdogan, M.	63	Mynarzova, L.	15
Fahmy, T.	71	Novinpour, E. A.	21
Fainisi, F.	28	Sabre, Z. A.	116
Fainisi, V. A.	28	Sensogut, C.	63
Falahian, A.	108	Taleghani, A. S.	108
Fener, M.	135	Tufekcioglu, F.	63
Göçmez, G.	95	Wang, C. M.	147
Gökçe, M. V.	135	Yang, C.-C.	85
Gundogdu, I. B.	122	Yavuz, F.	42
Hamaideh, A.	71	Yazicioğlu, D.	95
Hashim, M. N.	48	Yeh, C.-H.	85
İnce, I.	135	Yuan, L. H.	147
Janulikova, M.	15, 76	Zedef, V.	63