

TVSeminars-Mining One International Conference (TMIC 2022)

Held online

Atlantis Highlights in Engineering Volume 13

Toronto, Canada
12 – 13 December 2022

Editors:

**Sina Javankhoshdel
Yousef Abolfazlzadeh**

ISBN: 978-1-7138-7075-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Print copyright© (2023) by Atlantis Press (part of Springer Nature)
All rights reserved.
Copyright for individual electronic papers remains with the authors.

For permission requests, please contact the publisher:

Atlantis Press
Van Godewijkstraat 30
3311GX Dordrecht
The Netherlands

contact@atlantis-press.com

Printed with permission by Curran Associates, Inc. (2023)

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Numerical Modelling for Improved Open Pit Optimization..... <i>S. J. Jackson</i>	1
The Warm Blanket of Geotechnical Databases and the Reality of Rock Mechanics..... <i>Julian Watson, Antonio Verduzco Mendez, Patricia Robertson</i>	12
Effect of Seawater on the Mechanical Strength of Geopolymer/Cement Stabilized Sandy Soils	27
<i>Parisa Samadi, Ali Ghodrati, Pooria Ghadir, Akbar A. Javadi</i>	
Peer-Review Statements	36
<i>Sina Javankhoshdel, Yousef Abolfazlzadeh</i>	
Novel Approach for Particle Size Distribution Analysis. Applied Case to Rockfills and Waste Dumps Using Unmanned Aerial Vehicle (UAV)	38
<i>Marco Arrieta</i>	
Ground Forecasting in Mechanized Tunneling..... <i>Saadeldin Mostafa, Rita L. Sousa, Herbert H. Einstein, Beatriz G. Klink</i>	48
EPBM Advance Rate Prediction Using Hybrid Feature Selection and Support Vector Regression Modeling	61
<i>Shengfeng Huang, Misagh Esmaeilpour, Pooya Dastpak, Rita Sousa</i>	
Analysis of Deformations of Gravel Columns in Tailings Dams Using the Finite Element Method and Constitutive Equations..... <i>Kely Lara, Roxana Mamani, Jorge Cárdenas</i>	73
Comparative Analysis of the Effect of Disposal in Tailings and Waste Rock Piles..... <i>Michel Moreira Morandini Fontes, Edna Lizeth Ardila Montilla, Anderson Nascimento Milagres, Gladys Hurtado Aquino, Vanessa Cristina Justino</i>	87
Tailings Dam's Safety Assessment Considering Undrained Foundation Failure..... <i>Flávia Augusta Padovani, Thiago Bretas</i>	102
Probabilistic Assessment of Reinforced Soil Walls Using Fourth Moment Normal Transformation	111
<i>Ekansh Agarwal, Anindya Pain, Annan Zhou</i>	
A New Stochastic Response Surface Method in Spatial Variability Slope Stability Analysis..... <i>Sina Javankhoshdel, Thomas Zeger, Brigid Cami, Helmut Wahanik, Terence Ma</i>	117
Probabilistic Analysis of a Slope Using RLEM and Cross-Correlated Conditional Random Field	127
<i>Sina Javankhoshdel, Elahe Mohammadi, Reza Jamshidi Chenari, Terence Ma, Brigid Cami, Meghdad Payan</i>	
Meaningfulness of the Stable Range of Factor of Safety for Deep Pits – a Numerical Modelling Assessment..... <i>Mahdi Zoorabadi, Mojtaba Mousakhani</i>	137
A Case Study on the Use of Expert Selected Set Method in the Reliability Analysis of an Urban Deep Excavation Project	146
<i>Ali Fakher, Arefeh Arabaninezhad, Minoo Nikghalbpour</i>	

Tailings Dam Reservoir Sectoring Using CPTU and Geophysical Test Data.....	162
<i>Amanda Souza, Bruno Novais, Michel Fontes, Naiala Fidelis</i>	
Spatial Variability of Input Motion in Stochastic Slope Stability	173
<i>Pooneh Shah Malekpoor, Susana Lopez-Querol, Sina Javankhoshdel</i>	
Probabilistic Assessment of Seismic Bearing Capacity of Strip Footings Seated on Heterogeneous Slopes Using Finite Element Limit Analysis (FELA) and Response Surface Method (RSM).....	193
<i>Hessam Fathipour, Sina Javankhoshdel, Yousef Abolfazlzadeh, Meghdad Payan, Reza Jamshidi Chenari</i>	
Slope Stability, Performance and Berm Design of Small Arms Ranges for the Canadian Armed Forces	204
<i>Richard Leblanc, Maria Skordaki, Nicholas Vlachopoulos</i>	
Comparison Between Newmark Time History Analysis and Finite Element Method for Estimating Seismically Induced Slope Displacement.....	218
<i>Mahir Badanagki, Feng Li, Christian Armstrong</i>	
Optimization of Spline Slip Surfaces Using Metaheuristic Search in LEM.....	226
<i>Terence Ma, Brigid Cami, Sina Javankhoshdel, Brent Corkum, Thamer Yacoub</i>	
Investigating Sub-Soil Moisture Variation of Engineered Turf Cover for Landfills Through Field Instrumentation.....	236
<i>Md. Jobair Bin Alam, Maalvika Aggarwal</i>	

Author Index