



**1st International Conference on Geomechanics and
Geoenvironmental Engineering (iCGMGE 2017), 20-22 Nov 2017,
Sydney, Australia**

2nd GCSTMR CONGRESS

**Venue: Western Sydney University, Building EA, Parramatta South Campus,
Sydney, Australia**

*[Corner of Victoria Road and James Ruse Drive (entrance via Victoria Road), Parramatta
South, Sydney]*

Organized by

*Global Circle for Scientific, Technological and Management Research
(GCSTMR), Sydney, Australia*

Day 1 – Monday 20 November 2017

Time	Session
8:30 – 9:30	Registration Parramatta South Campus Room: Building EA.G Foyer
9:30 – 10:00	Conference Opening Building EA, Parramatta South Campus Room: EA.G.18(LT01)
10:00 – 10:45	Plenary 1 - Professor Ian D. Moore, Queen's University, Ontario, Canada Title: Geomechanics of Trenchless Pipe Installation, Repair and Replacement Chair: Professor Chin Leo Room: EA.G.18(LT01)
10:45 – 11:15	MORNING TEA Room: Building EA.G Foyer
11:15 – 12:00	Plenary 2 – Professor Xiao-Ling Zhao, Monash University, Australia Title: Research into Hybrid Construction utilising FRP and Seawater sea sand concrete Chair: Associate Professor Fidelis Mashiri Room: EA.G.18(LT01)
12:00 – 12:45	Plenary 3 – Professor Ashish Sharma, University of New South Wales, Australia Title: Water Resources Engineering and climate change: Recent developments and future challenges Chair: Associate Professor Ataur Rahman Room: EA.G.18(LT01)
12:45 – 13:45	LUNCH Room: Building EA.G Foyer
	Session Day1_1CA: Geomechanics and Geoenvironmental Engineering Chair: Professor Chin Leo Room: EA.G.36
13:45 -14:05	Invited paper title: Failure Analysis and Reinforcement Design of Retaining Structures for a Railway Square in a Mountainous Area (Paper ID iCGMGE_33) <i>Baiqing Zhang, Jiachong Zhou, Xiaonan Wang and Ying Wu</i>
14:05 - 14:25	Invited paper title: The simulation of stability of Datangbang landslide in the Three Gorges Reservoir (Paper ID iCGMGE_03) <i>Ye Li, Kunlong Yin, Lixia Chen, Deying Li, Fei Ma and Wen Zhang</i>
14:25 – 14:40	An Application of Cutter Soil Mixing Cut-off Wall for Excavation in Wuhan (Paper ID iCGMGE_34) <i>Baiqing Zhang, Hongying Xia and Bingqing Liu</i>

14:40 – 14:55	Landslide Susceptibility Assessment Using C5.0 Model in Wanzhou District (Paper ID iCGMGE_17) <i>Hui Xia, Kunlong Yin, Lei Gui, Lixia Chen, Wen Zhang and Xiaolin Fu</i>
14:55 – 15:10	Stability Analysis of a Double-deck Tunnel with a Diverging Ramp Tunnel (Paper ID iCGMGE_21) <i>Bumjoo Kim, You-Sung La, Wonhyuk Choi and Youngsuk Jo</i>
15:10 – 15:25	A study on the Effects of Mode of Wall Movement in Integral Abutment Bridges (Paper ID iCGMGE_18) <i>Ahmed Alqarawi, Chin Leo and Samanthika Liyanapathirana</i>
	Session Day1_1CB: Geomechanics and Geoenvironmental Engineering Chair: TBA Room: EA.G.33
13:45 -14:05	Invited paper title: Inverse Solutions of the Richards Equation: A Comparison of Genetic and Levenberg-Marquardt Algorithms (Paper ID iCGMGE_40) <i>Abbas El-Zein, George Chammoun and Leying Yang</i>
14:05 - 14:25	Invited paper title: Groundwater and Soil Vapour Containment Design at a MercuryContaminated Industrial Site (Paper ID iCGMGE_35)
14:25 – 14:40	Undrained Shear Strength and Consolidation Behaviour of Kaolinite at Elevated Temperatures (Paper ID iCGMGE_11) <i>Thomas Ring, Chin Leo, Samanthika Liyanapathirana and Qinghua Zeng</i>
14:40 – 14:55	Sulfuric Acid Induced Volume Changes in Fly Ash Amended Soil (Paper ID iCGMGE_20) <i>Hariprasad Reddy, Rama Vara Prasad Chavali and Arif Ali Baig Moghal</i>
14:55 – 15:10	Influence of Caustic Alkalis on Mineral Transformations in Red Earth (Paper ID iCGMGE_22) <i>Hariprasad Reddy and Lakshmi Sruthi P</i>
15:10 – 15:25	Paper TBA
15:25 – 15:55	AFTERNOON TEA Room: Building EA.G Foyer
15:55 – 16:40	Plenary 4 – Professor Chris Sorrell, University of New South Wales, Australia Title: Percolated Single-Crystal Mullite Fibres from Fly Ash: Vitreous Waste Material to High-Performance Refractory Chair: Dr Qinghua Zeng Room: EA.G.18(LT01)
16:40 – 17:25	Plenary 5 – Professor Junbin Gao, The University of Sydney, Australia Title: Clustering on Manifolds Chair: Dr M Rafiqul Islam Room: EA.G.18(LT01)
17:25 – 18:10	Plenary 6 – Dr M Rafiqul Islam, Charles Sturt University, Australia Title: Cumulative Timeline Analysis for Data Classification Chair: Professor Phill Kyu Rhee Room: EA.G.18(LT01)

Day 2 – Tuesday 21 November 2017

Time	Session
8:00 – 9:00	Registration Parramatta South Campus Room: Building EA.G Foyer
9:00 – 9:45	Plenary 7 – Professor Ashantha Goonetilleke, Queensland University of Technology, Australia Title: Management of Urban stormwater pollution: Progress and challenges Chair: Associate Professor Ataur Rahman Room: EA.G.18(LT01)
9:45 – 10:30	Plenary 8 - Professor Buddhima Indraratna, University of Wollongong, Australia Title: Ground Improvement for Transport Infrastructure Chair: Professor Chin Leo Room: EA.G.18(LT01)
10:30 – 11:00	MORNING TEA Room: Building EA.G Foyer
	Session Day2_2C: Geomechanics and Geoenvironmental Engineering Chair: Professor Henry Wong Room: EA.G.36
11:00 – 11:20	Invited paper title: On the Interpretation of Gravimetric Soil Water Retention Curve for Deformable Porous Media (Paper ID iCGMGE_30) <i>Nasser Khalili, Amin Pasha and Arman Khoshghalb</i>
11:20 – 11:40	Invited paper title: Hydromechanical triaxial behavior of unfired compacted earth for building construction (Paper ID iCGMGE_15) <i>Antonin Fabbri, Longfei Xu, Florian Champiré, Henry Wong and Fionn McGregor</i>
11:40 – 12:00	Invited paper title: Modelling unsaturated soil behaviour by degree of capillary saturation and effective inter-particle stress (Paper ID iCGMGE_14) <i>An-Nan Zhou, Shengshen Wu and Jie Li</i>
12:00 – 12:15	A thermodynamically consistent model on coupled poro-viscoplastic damageable behaviour of partially saturated rocks (Paper ID iCGMGE_23) <i>Tuan Anh Bui, Henry Wong and Frédéric Deleruyelle</i>
12:15 – 12:30	Pore-scale Simulation of Water Patch Formation in Unsaturated Granular Media (Paper ID iCGMGE_10) <i>Guanzhe Cui, Yixiang Gan, Shuoqi Li and Saba Gharehdash</i>
12:30 – 12:45	Slip line analysis of axisymmetric retaining wall interacting with unsaturated soil (Paper ID iCGMGE_43) <i>Thanh Vo and Adrian Russell</i>
12:40 -13:40	LUNCH Room: Building EA.G Foyer

13:40 – 14:15	Plenary 9 - Professor Raman Singh, Monash University, Australia Title: Graphene Coating and Alloy Nanocrystallinity: Novel Nano Approaches for Remarkable Corrosion Resistance Chair: Associate Professor Sri Bandyopadhyay Room: EA.G.18(LT01)
14:15 -14:50	Plenary 10 - Professor Shams Rahman, RMIT University, Australia Title: Supply Chain Connectivity, Business Sustainability and Ethics Chair: Dr Mamta Chowdhury Room: EA.G.18(LT01)
	Session Day2_3C: Geomechanics and Geoenvironmental Engineering Chair: A/Professor Samanthika Liyanapathirana Room: EA.G.36
14:50 – 15:10	Invited paper title: Influence of Underground Opening with Stiff Lining on Seismic Response of Buildings (Paper ID iCGMGE_42) <i>Bohan Huang, Behzad Fatahi and Hadi Khabbaz</i>
15:10 – 15:30	Invited paper title: Smear Zone Characterization using Field Samples (Paper ID iCGMGE_44) <i>Cholachat Rujikiatkamjorn , Buddhima Indraratna and Darshana Perera</i>
15:30 – 15:45	A Computational Model for Laminar/Turbulent Flow Regimes within Hydro-fractures (Paper ID iCGMGE_26) <i>Mohammad Vahab and Nasser Khalili</i>
15:45 – 16:00	
15:50 – 16:20	AFTERNOON TEA Room: Building EA.G Foyer
	Session Day2_4CA: Geomechanics and Geoenvironmental Engineering Chair: TBA Room: EA.G.36
16:20 – 16:40	Invited paper title: Applications of Ground Improvement to Mitigate Geotechnical Risk (Paper ID iCGMGE_39) <i>Paul Hewitt</i>
16:40 – 17:00	Invited paper title: Case Histories of Driven Steel Piles on the East Coast of Australia (Paper ID iCGMGE_37) <i>Henry Zhang</i>
17:00 – 17:15	Modelling Thermo-mechanical Behaviour of Geothermal Energy Piles under Cyclic Loading (Paper ID iCGMGE_05) <i>Nanwangzi Wu and Yixiang Gan</i>
17.15 – 17.30	Challenges in modelling DCM column-supported embankments with post yield strain softening behaviour (Paper ID iCGMGE_16) <i>Manasi Wijerathna, Samanthika Liyanapathirana and Chin Leo</i>

17.30 – 17.45	New RSM Equations to Evaluate Strain Energy Required to Triggering Liquefaction and Sensitivity Analysis (Paper ID iCGMGE_19) <i>Nima Pirhadi, Xiaowei Tang and Qing Yang</i>
17.45 – 18.00	Paper TBA
	Session Day2_4CB: Geomechanics and Geoenvironmental Engineering Chair: TBA Room: EA.G.32
16:20 – 16:40	Invited paper title: Optimisation of the Underground Station Wall Design Through Ground-Structure Interaction Analysis (Paper ID iCGMGE_32) <i>Chenhui Lee, Thomas Miller and Jeff Hsi</i>
16:40 – 17:00	Invited paper title: Design and Performance of Arch Culvert and RSW Constructed on Improved Soft Ground (Paper ID iCGMGE_38) <i>Bosco Poon and Kim Chan</i>
17:00 – 17:15	Modelling of Dynamic Pile-Soil-Pile Interaction Using Radiation Elements (Paper ID iCGMGE_25) <i>Babak Shahbodagh, Mohammad Ashari and Nasser Khalili</i>
17.15 – 17.30	The Effects of Impact Loading on Integral Barrier-Retaining Wall System (Paper ID iCGMGE_45) <i>Yang An, Xiao Bo, Shrestha Binod, Chin Leo, Samanthika Liyanapathirana and Henry Wong</i>
17.30 – 17.45	Smoothed Particle Hydrodynamics Simulations for Hysteretic Behaviours of Capillary Interactions (Paper ID iCGMGE_04) <i>Yanyao Bao, Ling Li, Luming Shen and Yixiang Gan</i>
17.45 – 18.00	Paper TBA
19:00 – 21:30	CONFERENCE DINNER (Only for the CONFERENCE DINNER ticket holders)

Day 3 – Wednesday 22 November 2017

Time	Session
8:00 – 9:00	Registration Parramatta South Campus Room: Building EA.G Foyer
9:00 – 9:45	Plenary 11 – Professor Brian Uy, The University of Sydney, Australia Title: Australasian Structural Engineering Research in Steel and Composite Structures and its influence on International Design Codes Chair: Professor Zhong Tao Room: EA.G.18(LT01)
9:45 – 10:30	Plenary 12 - Professor Yinghe He, James Cook University, Australia Title: Development of innovative processes for the material recovery from spent rechargeable batteries Chair: Dr Qinghua Zeng Room: EA.G.18(LT01)
10:30 – 11:00	MORNING TEA Room: Building EA.G Foyer
	Session Day3_5C: Geomechanics and Geoenvironmental Engineering Chair: TBA Room: EA.G.36
11:00 – 11:15	The Effect of Utilization of RCA on Volumetric Properties of Asphalt Mixtures (Paper ID iCGMGE_36) <i>Farzaneh Tahmoorian, Bijan Samali and Chin Leo</i>
11:15 – 11:30	Cracking to curling transition in drying colloidal films (Paper ID iCGMGE_07) <i>Weipeng Meng, Mingchao Liu, Yixiang Gan and Changqing Chen</i>
11:30 – 11:45	Paper TBA
11:45 – 12:00	Paper TBA
12:00 – 12:15	Paper TBA
12:15 – 12:30	Paper TBA
12:40 -13:40	LUNCH Room: Building EA.G Foyer
13:40 – 14:15	Plenary 13 - Professor Peter Coombes, Managing Director Urban Water Cycle Solutions , Sydney, Australia Title: Systems analysis of big data and macroeconomic history to reveal insights for water policy and markets Chair: Associate Professor Ataur Rahman Room: EA.G.18(LT01)
14:15 -14:30	CONFERENCE CLOSING SESSION Best Paper Award Room: EA.G.18(LT01)