

GEOTEC HANOI 2023



**Conference
Program
BOOK**



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Introduction

The series of International Conference on Geotechnics for Sustainable Infrastructure Development (GEOTEC HANOI) was organized successfully in 2011, 2013, 2016 and 2019 in Hanoi and it has become a well-known event not only in Vietnam but also internationally for its excellent quality and organizational scale. Each conference was a great event for scholars and professional engineers from around the world to share and learn the most up-to-date knowledge and technologies in the field of geotechnical engineering. At the conferences, world-class experts delivered keynote lectures: Prof. Sven Hansbo (Sweden), Prof. Kenji Ishihara and Dr. Hiroshi Yoshida (Japan), Prof. Harry G. Poulos (Australia), Prof. Pieter A. Vermeer (Netherlands), and Prof. Alain Guilloux (France) in GH2011; Prof. Rolf Katzenbach (Germany), Prof. Alain Guilloux (France), Prof. Fumio Tatsuoka (Japan), Prof. Kenichi Soga (United Kingdom), Prof. Helmut Schweiger (Austria), and Prof. Sven Hansbo (Sweden) in GH2013; Prof. Bengt H. Fellenius (Canada), Prof. Buddhima Indraratna (Australia), Prof. Chang-Yu Ou (Chinese Taipei), Dr. Jamie Standing (UK), and Prof. Kazuya Yasuhara (Japan) in GH2016; Prof. Harry Poulos (Australia), Prof. Adam Beruijen (Belgium), Prof. Masaki Kitazume (Japan), Prof. Delwyn Fredlund (Canada), Prof. Lidija Zdravkovic (UK), and Prof. Mark Randolph (Australia) in GH2019, <https://geotechn.vn/geotec-hanoi-rewind>. Each event was an excellent chance for sponsors and exhibitors to show and promote their services.

The 5th International conference, GEOTEC HANOI 2023 (<https://geotechn.vn>), which is organized by FECON Corporation, Vietnam Society for Soil Mechanics and Geotechnical Engineering (VSSMGE), Japanese Geotechnical Society (JGS), Thuyloi University (TLU), and Vietnam Petroleum Institute (VPI), will take place on December 14-15, 2023 at the National Convention Center (NCC), Hanoi, Vietnam. The conference is honorably patronized by the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and Japan International Cooperation Agency (JICA). The conference will welcome world-leading professors to deliver keynote and invited lectures for six key conference themes

Conference Themes

- ① Deep Foundations

- ② Tunnelling and Underground Spaces

- ③ Ground Improvement

- ④ Landslide and Erosion

- ⑤ Geotechnical Modelling and Monitoring

- ⑥ Offshore Wind Power and Coastal Geotechnics

Keynote Lectures



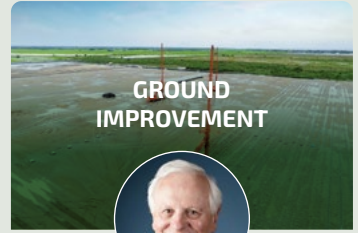
Prof. Alessandro Mandolini

University of Campania (Italy),
Chair of ISSMGE TC212



Prof. Giulia M.B. Viggiani

University of Cambridge (UK),
Chair of ISSMGE TC204



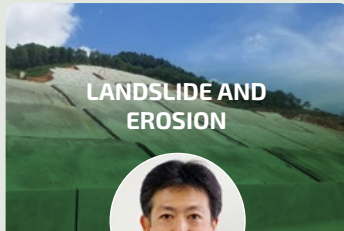
Prof. Rainer Massarsch

Geo Risk & Vibration
Scandinavia AB (Sweden)



Prof. Antonio Gens

Technical University of
Catalonia (Spain)



Prof. Mitsu Okamura

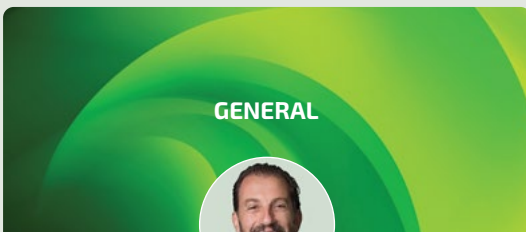
Ehime University (Japan)
Vice president of JGS



Prof. Richard Jardine

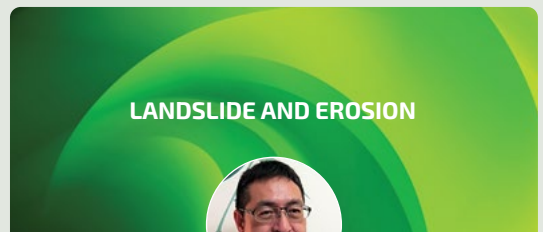
Imperial College London (UK)

Special Invited Lectures



Dr. Marc Ballouz

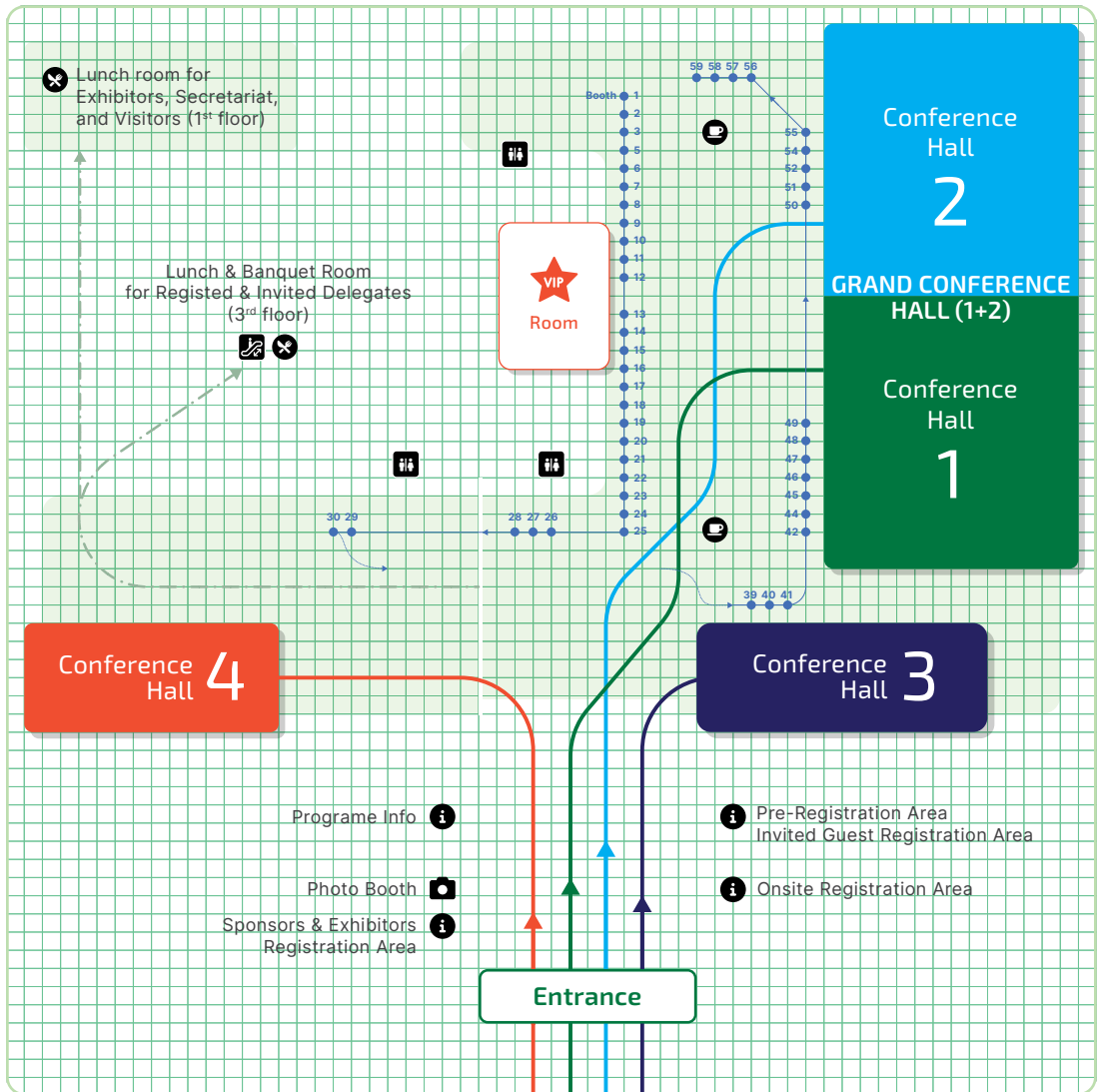
President of ISSMGE
(USA)



Prof. Keh-Jian Shou

Vice President Asia of ISSMGE
(Chinese Taipei)

Conference and Exhibition Area



- | | |
|---|--|
| ■ Grand Conference Hall | i Information Area |
| ■ Conference Hall 1 | 📷 Photobooth |
| ■ Conference Hall 2 | ☕ Tea Break |
| ■ Conference Hall 3 | 🍴 Restaurant |
| ■ Conference Hall 4 | 🚻 Restroom |
| ● Exhibition Booth | 🚶 Escalator |

Note

The Grand Conference Hall is a combined one of the Conference Hall 1 and Conference Hall 2

Day 1

Thursday, December 14, 2023

TIME	ACTIVITY			
Grand Conference Hall				
7:30 — 9:00	RECEPTION			
9:00 — 9:45	OPENING CEREMONY <ul style="list-style-type: none"> Opening speech of the Co-chairman of the Organizing Committee, Chairman of the Scientific Committee, President of the VSSMGE (Dr. Phung Duc Long) Speech of the president of the ISSMGE (Dr. Marc Ballouz) Speech of a representative official of the Government and declaration of the conference opening 			
9:45 — 10:15	SPECIAL INVITED LECTURE: Geotechnical Philosophy and Cases of Site Reuse — Dr. MARC BALLOUZ, ISSMGE President			
10:15 — 10:45	SVEN HANSBO LECTURE: Applications of Deep Vertical Vibratory Compaction — Prof. RAINER MASSARSCH			
10:45 — 11:15	Photo Session (1 st time) and Tea Break			
11:15 — 11:45	KEYNOTE LECTURE: Prediction of the Hydraulic Gradient for Backward Erosion Piping in River Levees — Prof. MITSU OKAMURA			
11:45 — 12:15	KEYNOTE LECTURE: Urban Tunnelling – The Challenges of Creating Underground Space in Historic Cities — Prof. GIULIA VIGGIANI			
12:15 — 13:30	Lunch Break (The grand hall will be partitioned into Hall 1 and Hall 2)			
	Conference Hall 1	Conference Hall 2	Conference Hall 3	Conference Hall 4
13:30 — 15:30	SESSION 1. Deep Foundations	SESSION 5. Geotechnical Modelling and Monitoring	SESSION 4. Landslide and Erosion	SESSION 3. Ground Improvement
15:30 — 16:00	Poster Session and Tea Break			
16:00 — 18:30	SESSION 1. Deep Foundations	SESSION 5. Geotechnical Modelling and Monitoring	SESSION 4. Landslide and Erosion	SESSION 3. Ground Improvement

Day 2

Friday, December 15, 2023

TIME	ACTIVITY			
	Conference Hall 1	Conference Hall 2	Conference Hall 3	Conference Hall 4
8:00 — 10:00	SESSION 1. Deep Foundations	SESSION 5. Geotechnical Modelling and Monitoring	SESSION 6. Offshore Wind Power and Coastal Geotechnics	SESSION 3. Ground Improvement
10:00 — 10:30	Poster Session and Tea Break			
10:30 — 12:00	SESSION 2. Tunnelling and Underground Spaces	SESSION 5. Geotechnical Modelling and Monitoring	SESSION 6. Offshore Wind Power and Coastal Geotechnics	SESSION 3. Ground Improvement
12:00 — 13:00	Lunch Break			
13:00 — 15:00	SESSION 2. Tunnelling and Underground Spaces	SESSION 5. Geotechnical Modelling and Monitoring	SESSION 6. Offshore Wind Power and Coastal Geotechnics	SESSION 3. Ground Improvement
15:00 — 15:30	Poster Session and Tea Break			
Conference Hall 1				
15:30 — 16:00	SPECIAL INVITED LECTURE: On the Landslide Susceptibility and Resilience with Impact of Climate Change — Prof. KEH-JIAN SHOU, ISSMGE Vice-President for Asia			
16:00 — 16:30	KEYNOTE LECTURE: Continuum and Discrete Modelling of Penetration Problems — Prof. ANTONIO GENS			
16:30 — 17:00	KEYNOTE LECTURE: Time-Dependent Axial Capacity of Driven in Clays and Sands — Prof. RICHARD JARDINE			
17:00 — 17:30	KEYNOTE LECTURE: Pile Foundations: 80 Years of Research and Practice (1943-2023) — Prof. ALESSANDRO MANDOLINI			
17:30 — 18:00	CLOSING CEREMONY <ul style="list-style-type: none"> Presenting appreciation souvenirs to keynote and special invited speakers Presenting appreciation souvenirs to sponsors Presenting awards to authors of best posters and best oral presentations Presenting certificates and souvenirs from the president of the ISSMGE (Dr. Marc Ballouz) to young scientists Vote of thanks and presenting bouques to committees and supporting organizations Closing speech of the president of the JGS (Prof. Junichi Koseki) Taking group photos (2nd time) 			
18:00 — 18:30	SHORT BREAK			
18:00 — 21:00	GALA DINNER <ul style="list-style-type: none"> Speech of the diamond sponsors Banquet with music performance - The quintessence of the Northwest 			

Day 1

December 14, 2023

Conference Hall 1

Chairman: Prof. Alessandro Mandolini

Co-Chairman: Dr. Phung Duc Long

Session 1. Deep Foundations

TIME	PRESENTATION TITLE
13:30 — 13:45	Stress distribution of pile group on Jakarta Diluvium Clay using 3D finite element method — Stefanus Diaz Alvi, Stella Liviana, Paulus P. Rahardjo
13:45 — 14:00	FEM Simulation of single pile load tests — Long Duc Phung
14:00 — 14:15	The effects of ground anchor prestressing on pile group reaction force redistribution and settlement as permanent foundation of high-rise building using 3D FEM — Stefanus Diaz Alvi, Yiska Vivian C. Wijaya, Bondan W. Anggoro, Paulus P. Rahardjo
14:15 — 14:30	Numerical study on behaviors of vertically-loaded Tender Net Foundations supported by piles — Han Vo-Cong, Kinji Takeuchi, Yasuo Tomono, Tatsunori Matsumoto
14:30 — 14:45	An appraisal of the second-order pile buckling model according to the 2nd generation Eurocode 7 — Gary Axelsson, Fredrik Jansson
14:45 — 15:00	Study on uplift capacity of belled pile in sandy soil — Toru Watanabe, Kentaro Hama, Yoshihiro Horii, Yoshitaka Nakanishi
15:00 — 15:15	Modified β -method for pile design in partially saturated soils: Theoretical considerations for an effective stress framework — T. Matthew Evans, Josiah Baker, Tuyen Ngoc Tran
15:15 — 15:30	Axial load bearing capacity solutions of PHC nodular pile: a new advancement in Vietnam engineering practice — Tuetakoun Aphisith, Duy-Khuong Ly, Tan Nguyen, Jim Shiau
15:30 — 15:45	Enhancing rapid construction profitability of the monolithic steel structure of pile-pier for bridges in Vietnam — Hanh Quang Le, Trinh Thi Tuyet Nguyen, Masaya Higashi
15:45 — 16:00	Poster Session and Tea Break

TIME	PRESENTATION TITLE
16:00 — 16:15	Design challenges of large diameter and long steel pipe pile in high plasticity clay at Patimban Port Development Project — Ryota MIZUNO, Le Phuong Dong, Aditya Karya, Thanh T. Nguyen
16:15 — 16:30	The use of Rapid Load Test as alternative load test method of bored piles — Poh Hai Ooi, Yong Ping Oh
16:30 — 16:45	Building up a dataset for investigation of the load transfer mechanism of bored piles from case histories in Vietnam — Phi Nguyen-Dinh, Tuetakoun Aphisith, Tan Nguyen, Jim Shiau
16:45 — 17:00	Correlation between SPT indexes of soils to compression strength and settlement of concrete piles: An experimental study in Bac Giang, Vietnam — Van Tai Tang, Tran Khoa Vu, Praveen M Huded, Thuy Lan Chi Nguyen
17:00 — 17:15	Comparative static and rapid load tests on steel pipe piles: A case study at Sashima test yard — Shihchun Lin, Koji Watanabe, Shuichi Kamei, Tatsunori Matsumoto
17:15 — 17:30	Bearing-capacity assessment of the instrumented shaft grouting barrette pile by conventionally static loading test — Trung Thanh Le, Lan Vu Hoang Bach, Hai Minh Nguyen
17:30 — 17:45	State of the practice - Dynamic load testing of driven piles in the United States — Thai Nguyen
17:45 — 18:00	Case study: Dynamic load testing of a jointed concrete pile project in Malaysia — Thai Nguyen
18:00 — 18:15	Bearing characteristics of sheet piles subjected to vertical monotonic and quasi-static cyclic load in saturated clay ground — Xi Xiong, Jiapeng Yu, Lua Thi Hoang, Tatsunori Matsumoto
18:15 — 18:30	Load-displacement relations of a driven steel pipe piles from static and rapid load tests, and empirical formulas based on SPT and CPT -A case study at Sashima test yard — Shihchun Lin, Koji Watanabe, Yutaro Naka, Tatsunori Matsumoto

Day 1

December 14, 2023

Conference Hall 2

Chairman: Prof. Antonio Gens

Co-Chairman: Dr. Le Viet Hung

Session 5. Geotechnical Modelling and Monitoring

TIME	PRESENTATION TITLE
13:30 — 13:45	Monitoring strains and temperatures in a deep excavation base slab using fibre-optic bragg gratings — Peter J. Hensman, Brian B. Sheil
13:45 — 14:00	Bridge condition survey of critical bridges in the Philippines — Rowena Garcia, Luis Ariel Morillo, Patrick Adrian Selda, John Alejandro Rivera
14:00 — 14:15	Study on real-time monitoring of an actual slope and slope stability management criteria — Shota Yoshida, Xi Xiong, Tatsuro Nakai, Saiji Fukada
14:15 — 14:30	Measurement results of lateral displacement of the earth retaining wall using 3-Axis MEMS inclinometer — Takao Kono, Toshiaki Sugawara, Teruhiko Sugimoto
14:30 — 14:45	Shallow foundation design using dynamic cone penetrometer and taking into account liquefaction aspect — Tuan-Anh Luong, Miguel Angel Benz-Navarrete, Philippe Reiffsteck, Fabien Szymkiewicz
14:45 — 15:00	Development of a digital twin system for retaining walls — Dong-Gun Lee, Ki-il Song, Kyung-Nam Kang, Joon-Sang An
15:00 — 15:15	Intelligent framework for finite element analysis with machine learning and back analysis capabilities for geotechnical engineering — Chin Pang, Marco Liang, Zhenya Yang, Chia Weng Boon
15:15 — 15:30	Sustainable dike adaptation measures using finite element method and optimization algorithm NSGA-II — Kacper Cerek, Elnaz Hadjiloo, Jürgen Grabe
15:30 — 16:00	Poster Session and Tea Break

TIME	PRESENTATION TITLE
16:00 — 16:15	Comparative study on settlement of EPS road embankments by numerical method — Quoc-Bao Truong, Anh-Tuan Vu, Tatsunori Matsumoto, Duc-Long Phung
16:15 — 16:30	Seismic evaluation and retrofitting of deficient masonry building considering SSI effects — Lakshmi Latha, Samit Ray-Chaudhuri, Prishati Raychowdhury
16:30 — 16:45	Large-displacement numerical analysis of soil failure mechanism for soil-embedded cylinder interaction — Kien Trung Nguyen
16:45 — 17:00	Coupled thermal-hydraulic-mechanical fluid simulation - An innovative tool for the design of grouting in soils — Conrad Boley, Yashar Forouzandeh, Lisa Wilfing
17:00 — 17:15	Undrained bearing capacity of strip footing on clayey soil subjected to combined eccentric and inclined loads — Pham Ngoc Quang, Ohtsuka Satoru, Pham Ngoc Vinh
17:15 — 17:30	Numerical simulations of pile foundations considering small and large deformations — Sascha Henke, Maliha Tasnim Tilat, Philipp Wiesenthal
17:30 — 17:45	Scattering of seismic Rayleigh waves by a semi-circular basin with hysteresis material model — Kien Trung Nguyen, Hoang The Thao, Trong Nghia Le, Truong Son Bui
17:45 — 18:00	Numerical shear band strengthening with contact modelling for the increase of load capacity of geotechnical structures — Elnaz Hadjiloo, Jürgen Grabe
18:00 — 18:15	Calculation of pore pressure dissipated from a clay layer due to groundwater extraction using physics-informed neural network (PINN) with reference to land subsidence analysis — Giao Huy Pham, Hien Huy Doan
18:15 — 18:30	Detection of cavities beneath concrete structures using acoustic wave in dry and saturated soils — Seonghun Kang, WooJin Han, Dongsoo Lee, Jong-Sub Lee
18:30 — 18:45	Numerical study on the seismic behavior of narrow back to back geosynthetic reinforced soil walls with different reinforcement arrangements — Ramyasri Rachamadugu, Amit Prashant

Day 1

December 14, 2023

Conference Hall 3

Chairman: Prof. Mitsu Okamura

Co-Chairman: Prof. Trinh Minh Thu

Session 4. Landslide and Erosion

TIME	PRESENTATION TITLE
13:30 — 13:45	Spatially distributed mapping of soil erosion in a debris catchment after the 2018 Palu earthquake — I Gede Tunas, Sriyati Ramadhani
13:45 — 14:00	Mechanism of large-scale landslide development and remedial methods - A case study in Vietnam — Manh Nguyen Duc, Thanh Vu Tien, An Ho Sy, Minh Khoa Vo
14:00 — 14:15	A case study of volcanic soil embankment failure triggered by soil softening due to water infiltration and water seepage in Bandar Lampung, Indonesia — Albert Johan, Andy Sugianto, Paulus P. Rahardjo
14:15 — 14:30	Rock planar slide - A case study at Tien Yen-Mong Cai expressway, Vietnam — Tuan-Nghia Do, Lan Chau Nguyen, Nguyen Quang Tuan, Trang Thi Ha Vu
14:30 — 14:45	Rehabilitation and protection of bridge against landslides: Case histories at Semarang Ungaran bridge — Paulus P. Rahardjo, Muhrozi, Y. Wisanto
14:45 — 15:00	Mechanism and rectification method on difficult Tomo landslide, Sumedang, West Java, Indonesia — Kirana Rongsadi, Albert Johan, Bondan W. Anggoro, Paulus P. Rahardjo
15:00 — 15:15	The influence of K0 value on excavated slope stability: Case study Cisumdawu Toll Road, Indonesia — Delaneira Princess Seourin, Martin Wijaya, Bondan W. Anggoro, Paulus P. Rahardjo
15:15 — 15:30	Finite element simulation for creep behavior actualized before the landslide due to groundwater fluctuations based on centrifuge model test — Yuanying Li, Ryogo Isokawa, Shun Tateya, Akihiko Wakai

TIME	PRESENTATION TITLE
15:30 — 16:00	Poster Session and Tea Break
16:00 — 16:15	Effect of wind load according to foundation embedded depth in solar power plant in slope — Jong-Won Woo, Jeong-Yeon Yu, Jang-Hyun Park, Ki-Il Song
16:15 — 16:30	Application of TAG_FLOW model for the simulation of slope disaster in central Vietnam caused by a typhoon in 2020 — Shota Fukushima, Nguyen Van Thang, Go Sato, Akihiko Wakai
16:30 — 16:45	Effect of horizontal drain installation pattern on drainage performance and slope stability — S O A D Mihira Lakruwan, Hiromu Oikawa, Akiyoshi Kamura, Motoki Kazama
16:45 — 17:00	Applicability of corkscrew extraction technique in strength characterization of Phragmites Australis rooted soil — Abhijith Kamath, Karine van Bergen, Geert Ravenshorst, Jan-Willem van de Kuilen
17:00 — 17:15	Use of Electrical Resistivity Tomography for detecting quick clay in Norway — Thi Minh Hue Le, Saman Tavakoli, Jean-Sebastien L'Heureux, Iason Papaioannou
17:15 — 17:30	Soil-water characteristic curve analysis of weathered granite soil according to fine content — Sangbeen Lee, Jeongyoun Lee, Jongwon Jung
17:30 — 17:45	Shear properties and post-shear water content distribution of clayey soil under different loading conditions by ring shear tests — Kyoma Kusano, Motoyuki Suzuki
17:45 — 18:00	Large slope disaster at Hakusan district in Japan and estimation of risk by rockfall — Hiroshi Masuya, Takanari Fuji, Yusuke Kurihashi
18:00 — 18:15	Distributed optical fibre based pore water pressure sensor for early warning of geohazards — Kusumi Anjana, Madhubhashitha Herath, Jayantha Epaarachchi, Nadeej Priyankara

Day 1

December 14, 2023

Conference Hall 4

Chairman: Prof. Rainer Massarsch

Co-Chairman: Dr. Nguyen Tien Dung

Session 3. Ground Improvement

TIME	PRESENTATION TITLE
13:30 — 13:45	Undrained shear strength increase of clay among SCPs examined in the triaxial cell — Yoichi Watabe
13:45 — 14:00	Numerical analysis on deformation of soft organic soil improved and stabilized by sand columns — Viet Hung Le, Frank Rackwitz
14:00 — 14:15	Comparison between 3D FEM analysis with static load test data of Downhole Dynamic Compaction: A case study of ground improvement works on volcanic soils, East Java, Indonesi — Ahmad Kemal Arsyad, Martin Wijaya, Paulus P. Rahardjo
14:15 — 14:30	Fundamental study on application of artificial neural network model to the mixture design of soil treated with paper sludge ash-based stabilizer — Phuong-Anh T. To, Kimitoshi Hayano, Yoshitoshi Mochizuki
14:30 — 14:45	Evaluation of reinforcement of a pile by cement-mixed soil improvement using model tests and 3D elasto-plastic FEM simulation — Saya Okabe, Toshiyuki Kamata, Atsushi Shimamura, Akihiko Wakai
14:45 — 15:00	Design of sand moving operation: back analysis and settlement prediction — Chi T. Nguyen, Thang M. Vo, Quan A. Vu, Quy T. Truong
15:00 — 15:15	Strength and verticality of Nordic dry deep mixing columns - A case study in Norway — Solve Hov, Markus Nikolai Berner, Sigbjørn Rønning, Bjørn Kristian Fiskvik Bache
15:15 — 15:30	Tailing storage facilities with cemented berms for sustainable production of raw materials — António Viana da Fonseca, Isabela Caetano, Bernardo Meneses, Sara Rios

TIME	PRESENTATION TITLE
15:30 — 16:00	Poster Session and Tea Break
16:00 — 16:15	A study of the anisotropy of improved clay using the Nordic dry deep mixing method — Solve Hov
16:15 — 16:30	Effects of cement ratio and curing period on interface shear strength of cement treated soil — Thanh-Tu Nguyen, Minh-Duc Nguyen
16:30 — 16:45	Construction challenges and quality control and assurance of wet deep soil mixing for an approach embankment of an overbridge — Kim Chan
16:45 — 17:00	Mixture design of liquefied and stabilized soil using high-water-content cohesive soil as raw material and consistency of quality in on-site manufacturing — Akihiko Izumi
17:00 — 17:15	Assessment of strength and compaction properties of clays treated with paper sludge-based stabilizers from laboratory mixture tests — Navila Tabassum, Kimitoshi Hayano, Hiromoto Yamauchi
17:15 — 17:30	Reliability analysis of strength of stabilised soil — Ansu Thomas
17:30 — 17:45	Geotechnical investigation and evaluation of steel slag mixed ground — Kosei Kawata, Kazuhiro Tsurugasaki, Tomoya Sato
17:45 — 18:00	Preliminary evaluation of the viability of single-use face masks as a substitute nonwoven geotextile — Ella Jotojot, Donn Caryl Cabase, Marvin Lester Chu, Ryan Ramirez
18:00 — 18:15	Behavior of encased stone column-reinforced soil under eccentrically inclined loads — Ashutosh Kumar Singh, Venkata Balaiah Kami, Anumita Mishra

Day 2

December 15, 2023

Conference Hall 1

Chairman: Prof. Alessandro Mandolini

Co-Chairman: Dr. Phung Duc Long

Session 1. Deep Foundations

TIME	PRESENTATION TITLE
8:00 — 8:15	Development of t-z and q-z curves for driven piles and bored piles in alluvial clay soil based on fiber optic instruments - A case study in Bekasi, Indonesia — Prieschila C.Tamsir, Ricky Setiawan, Bondan W. Anggoro, Paulus P. Rahardjo
8:15 — 8:30	Case history of soil-cement piles with H-shaped steels and vertical loading tests — Junji Hamada, Yuji Taya, Kiyoshi Yamashita, Hidemi Ikeda
8:30 — 8:45	Forensic investigation of pile damages using dynamic load test and continuous monitoring, case study in Palembang, Indonesia — Stefanus Diaz Alvi, Paulus P. Rahardjo
8:45 — 9:00	Geotechnical design of onshore wind turbine foundations: Some applications and lessons learned in Vietnam — Duc-An Ho, Trung-Kien Nguyen, Tien Dung Nguyen
9:00 — 9:15	Analysing the suitability of the American Petroleum Institute filter press test for polymer support fluids — Daniel McNamara, Brian Sheil, Stephan Jefferis
9:15 — 9:30	Studying on bending resistance of monolithic steel structure of pile-pier — Trinh Thi Tuyet Nguyen, Sayuri Kitaichi, Lam Duy Dao, Nobuyuki Matsui
9:30 — 9:45	Prediction of ground surface settlements induced by deep excavation using a closed-form solution — Thanh Son Nguyen, Suched Likitlersuang, Van Qui Lai, Trung Nghia Phan
9:45 — 10:00	Laboratory testing of open-dug caisson skin friction during sinking in sands — Alexander W. Swallow, Jack O. Templeman, Bryn M. Phillips, Brian B. Sheil
10:00 — 10:30	Poster Session and Tea Break

Conference Hall 1

Chairman: Prof. Giulia M.B. Viggiani

Co-Chairman: Prof. Le Quang Hanh

Session 2. Tunnelling and Underground Spaces

TIME	PRESENTATION TITLE
10:30 — 10:45	Ground movements in shield tunnelling for MRT Orange Line in Bangkok — Ochok Duangsano, Kangwan Kandavorawong, Auttakit Asanprakit, Pornkasem Jongpradist
10:45 — 11:00	Evaluating interaction between structural supports and sedimentary rock for a tunnel with penstock at a hydropower plant in Laos — Le Thi Minh Giang, Le Quang Huy
11:00 — 11:15	The design of mountainous and sub-sea tunnels as climate resilient infrastructures using the Norwegian Method of Tunnelling (NMT) — Rajinder Bhasin, Arnstein Aarset
11:15 — 11:30	Trans-Tokyo Bay Highway (Submarine Auto-Route) — Yukitake Shioi
11:30 — 11:45	Applying buttress wall to reduce displacement of a deep excavation adjacent to the Ben Thanh - Suoi Tien Metro tunnel — Nghia Trong Le, Kien Trung Nguyen, Trung Minh Nguyen
12:00 — 13:00	Lunch break
13:00 — 13:15	Polynomial regression analysis method for predicting excavation-induced deformation in Shanghai soft soil — Hechen Zhou, Ruituo Wu, Xiaoqiang Gu, Zhaohui Qin
13:15 — 13:30	FEM back-analysis of a deep excavation in Hanoi, Vietnam — Tuan Van Nguyen, Nam Quang Tran, Truong Xuan Dang
13:30 — 13:45	Evaluation of retaining wall and surrounding ground behavior in soft cohesive soil by FEM analysis — Hiroto Kumagai, Takao Kono, Shou Nishiie
13:45 — 14:00	Comparing prestressed wales system and traditional shoring system method for a deep excavation using bored pilling wall in Ho Chi Minh City — Nghia Trong Le, Vien Ngoc Truong, Kien Trung Nguyen
14:00 — 14:15	Effect of diaphragm wall stiffness for a deep excavation on adjacent tunnel deformation — Nghia Trong Le, Kien Trung Nguyen, Son Ngoc Nguyen, Trung Minh Nguyen
14:15 — 14:30	Finite element analysis of buttress wall to reduce lateral deformation of deep excavation adjacent to tunnels in HCMC — Van Qui Lai, Thai Trung Le, Thi Thanh Hai Truong, Tran Anh Toan Le
14:30 — 14:45	Numerical analysis on the performance of anchored diaphragm walls for a deep excavation in Hanoi — Thanh Son Nguyen, Quoc Khanh Nguyen
14:45 — 15:00	Python-based visualization and characterization of subsurface profile for a long-distance subway alignment in Manila — Elaine Marie Z. Peña, Pham Huy Giao, Noppadol Phien-wej, Roy Anthony C. Luna

Day 2

December 15, 2023

Conference Hall 2

Chairman: Prof. Antonio Gens

Co-Chairman: Dr. Le Viet Hung

Session 5. Geotechnical Modelling and Monitoring

TIME	PRESENTATION TITLE
8:00 — 8:15	Exploring the mitigation measures of overhanging antidip slope by centrifuge tests and DEM modeling — Wen-Chao Huang, Pei-Syuan Wu, Mei-Wen Chen
8:15 — 8:30	Numerical modeling of pull-out experiments on assembly of aluminum rods using DEM — Kohei GOHJI, Motoyuki SUZUKI, Minato GOYA
8:30 — 8:45	Detection of voids in karstic terrains with 3D surface-based seismic waveform tomography — Majid Mirzanejad, Khiem T. Tran
8:45 — 9:00	Utilization of geophysical methods for hazard assessment and risk management for various projects in the Philippines — Kate Trishia Papina, Arian John Fruto, Roy Anthony Luna, Ramon Quebral
9:00 — 9:15	Investigation of buried objects in the ground by borehole radar surveys — Ishikawa Keiji, Sakaida Keito, Dyah Sri Utami, Karasawa Shinsuke
9:15 — 9:30	Denosing ground penetrating radar images using generative adversarial networks — Ngoc Quy Hoang, Seonghun Kang, Jong-Sub Lee
9:30 — 9:45	Comparison of reconstituted normally consolidated kaolinite and illite in CIU triaxial tests showcasing the influence of pore fluid's salinity — Maximilian Schröder, Jürgen Grabe
9:45 — 10:00	Creep behavior for bentonite-sand mixture in unsaturated-saturated condition — Tomoyoshi Nishimura
10:00 — 10:30	Poster Session and Tea Break
10:30 — 10:45	Deformation properties of Red river sand in cyclic triaxial tests — Nguyen Hong Nam, Pham Van Manh
10:45 — 11:00	Evaluation of marine clays' strain rate dependency during the unloading process — Zheng Fan, Yoichi Watabe
11:00 — 11:15	Strength-deformation behavior of sandy soil with different structures: layered structure vs. uniform structure — Satoshi Matsumura, Daiki Takano, Cyrille Couture

TIME	PRESENTATION TITLE
11:15 — 11:30	Use of SWC-050 for measuring soil-water characteristic curves — Thi Phuong An Tran, Delwyn G. Fredlund, Tran Thanh Nhan
11:30 — 11:45	Composite materials for soil improvement applied to saturated clays - Requirements for the material properties — Conrad Boley, Paul Pratter
11:45 — 12:00	Numerical analysis of one-dimensional consolidation of unsaturated soil with non-Darcian fluid flow — Amit Singh, Manash Chakraborty
12:00 — 12:15	Machine learning aided prediction of pile behaviour: the role of data quality — Thanh T. Nguyen, Thien Q. Huynh, Hadi Khabbaz, Khuong Le Nguyen
12:15 — 13:00	Lunch break
13:00 — 13:15	Influence of rainfall on the stability of filtered tailings slope with waste rock inclusions — Hung Le, Thomas Pabst
13:15 — 13:30	The simplified approach for estimating liquefaction-induced settlement incorporating viscous models and subgrade reaction — Chih-Wei Lu, Minh-Tam Doan, Jing-Cai Jiang, An-Jui Li
13:30 — 13:45	Effect of fine particles content on earthquake-induced failure of volcanic embankments subjected to rainfall — Trong Nam Nguyen, Shima Kawamura, Minh Hieu Dao, Takumi Inaba
13:45 — 14:00	Specific energy as indicator of liquefaction in dynamic centrifuge experiments — Andrei Dobrisan, Stuart Kenneth Haigh
14:00 — 14:15	Role of drying and wetting soil-water characteristic curves and unsaturated permeabilities on slope stability at Almaty — Aiyam Amantay, Alfrendo Satyanaga, Sung-Woo Moon, Jong Kim
14:15 — 14:30	A study on the shear strength characteristics of granite weathered soil using a ring shear apparatus — Daewon Lee, Siwon Ryu, Jongwon Jung
14:30 — 14:45	Bayesian hierarchical model on crushability of pumice particle strength — I Wayan Ariyana Basoka, Kiyonobu Kasama, Zentaro Furukawa, Ahmad Rifa'i
14:45 — 15:00	Automatic detection model for underground pipelines using FDTD analysis and convolution neural network — Sang Yun, Lee, Ki-il, Song, Weiwei, Zhang, Joo Yeol, Bae

Day 2

December 15, 2023

Conference Hall 3

Chairman: Prof. Richard Jardine

Co-Chairman: Prof. Pham Huy Giao

Session 6. Offshore Wind Power and Coastal Geotechnics

TIME	PRESENTATION TITLE
8:00 — 8:15	MMALE simulations of vibro-installation of offshore monopiles — Lisa Berki, Daniel Aubram, Frank Rackwitz
8:15 — 8:30	FE modelling of monopiles in sand under monotonic and cyclic lateral loads — Hung Manh Ho, Ilaria Del Brocco, Zheng Li, Federico Pisanò
8:30 — 8:45	DEM analysis on soil horizontal support mechanism of monopile subjected to cyclic lateral loading — Shogo Ishii, Hirokazu Akagi, Rikito Hayashida
8:45 — 9:00	Model tests to investigate the influence of the spread angle on the pull-out resistance of the belled pile — Chinatsu Mitsuoka, Shun Nomura, Hitaki Inaba, Kazuo Tani
9:00 — 9:15	Experimental investigation on the time variation of the relationship between the resistance at the end of installation and the vertical capacity of pressed-in piles — Yukihiro Ishihara, Stuart Haigh, Junichi Koseki
9:15 — 9:30	Pullout capacity of suction anchors via 1G model tests assuming liquefied sandy ground — Ryosuke Komuro, Masayuki Tomita, Akiyoshi Kamura, Motoki Kazama
9:30 — 9:45	Effect of scour depth on natural frequency of offshore wind turbine with tripod suction bucket foundation — Kyeong-Sun Kim, Byong-Youn Hwang, Min-Ho Lee, Sung-Ryul Kim
9:45 — 10:00	Deformation analysis of laterally loaded bucket foundation of offshore wind turbines using HSS model — Jiandong Xiao, Xiaoqiang Gu, Zhenhao Shi, Yifeng Lin
10:00 — 10:30	Poster Session and Tea Break
10:30 — 10:45	Experimental investigation of bucket foundations subjected to vertical pullout loading in sand — Seongho Hong, Quang Thien Buu Nguyen, Woong-Jong Park, Sung-Ryul Kim

TIME	PRESENTATION TITLE
10:45 — 11:00	Bearing capacity of circular footing on $c-\phi$ slope — Minh Nhat Tran, Tirawat Boonyatee, Anh Tuan Le, Van Qui Lai
11:00 — 11:15	Long-term lateral cyclic response of shallow onshore wind turbine foundations resting on dense sand — Chisom Ifeobu, Christelle Abadie, Stuart Haigh
11:15 — 11:30	Effect of foundation tip shape on penetration mechanism visualized by transparent model ground — Rikuto Fujikata, Shun Nomura, Kazuo Tani
11:30 — 11:45	The competitive advantage of onshore lidar: Lessons from the offshore wind industry applications — Matt Smith, Euan Macdonald
11:45 — 12:00	Numerical investigation of drag embedment anchor model reduction for FOWTs in coarse and fine-grained Baltic Sea soil — Duy A. Dao, Konrad Dicke
12:00 — 13:00	Lunch break
13:00 — 13:15	Seabed morphological characterization and shallow geohazards at offshore Binh Thuan wind farm sites, southern Vietnam shelf — Bui Viet Dung, Pham Quy Ngoc, Doan Huy Hien, Do Van Chanh
13:15 — 13:30	Assessing the wind energy potential of Bach Ho field through high-resolution downscaling approach — Nga Thi Thanh Pham, Thang Van Vu, Anh Lam Nguyen, Han Trong Bui
13:30 — 13:45	Modeling of scholte wave for offshore seismic survey — Quoc Kinh Tran, Chih-Ping Lin, Ernian Pan, Tsai-Jung Wu
13:45 — 14:00	Evaluation of the potential for reusing dredged material for beach nourishment in Vietnam — Dung Duc Le, Tung Thanh Tran
14:00 — 14:15	Soil reaction around laterally loaded monopiles used by offshore wind turbines — Weichao Li
14:15 — 14:30	Scour protection with geotextile sand containers on foundation structures of offshore wind turbines — Janne Kristin Pries, Hoang Nguyen Ngoc
14:30 — 14:45	Offshore CPTU and DMT testing with a seabed penetrometer — Diego Marchetti

Day 2

December 15, 2023

Conference Hall 4

Chairman: Prof. Rainer Massarsch

Co-Chairman: Dr. Nguyen Tien Dung

Session 3: Ground Improvement

TIME	PRESENTATION TITLE
8:00 — 8:15	The use of innovative geocomposite drainage system - draintube to achieve optimal drainage efficiency at Pantai Nyanyi, Bali, Indonesia — Saikat Chatterjee, Rocky Leroy
8:15 — 8:30	Design of ultimate resistance of geogrid-reinforced working platforms for tracked plant over cohesive subgrade — Jörg Klompaker, Lars Vollmert, Hoang Ngoc Nguyen
8:30 — 8:45	Effects of sand cushion with geotextile reinforcement on improving consolidation behavior of soft clay — Minh-Duc Nguyen, Thanh-Tu Nguyen, Van-Hiep Nguyen, Hoang-Tuan Nguyen
8:45 — 9:00	Effectiveness of reclamation technology by combining cement deep mixing method (CDM) and cement pipe mixing method (CPM) on Patimban port development project in Indonesia — Tatsuru Aoyama, Yoshimitsu Yamada, Aditya Karya, Hiromi Namiki
9:00 — 9:15	Evaluation of instrumented preloading with PVD in deep soft Bandung Lacustrine Soil — Mikael Rafael, Stefanus Diaz Alvi, Paulus P. Rahardjo
9:15 — 9:30	Centrifugal model tests on soil behavior during preload removal from ground improved with vertical drains — Daisuke Niina, Yoichi Watabe
9:30 — 9:45	Impact of microbial metabolic products on the cone penetration and liquefaction resistance of sand — Saswati Datta, Debasis Roy
9:45 — 10:00	Using enzyme induced calcite precipitation (EICP) to improve strength of sandy soils — Mohsin Usman Qureshi, Azad Alshibli, Umayma Alshibli, Ghassan Alkindi
10:00 — 10:30	Poster Session and Tea Break

TIME	PRESENTATION TITLE
10:30 — 10:45	Design and lesson-learnt of the eco-friendly bamboo pile foundation in soft soil - A case study in Patimban deep seaport — Le Phuong Dong, Ryota Mizuno, Wahyu Trihadi ST, Thanh T. Nguyen
10:45 — 11:00	Strength and deformation characteristics of soft ground stabilized by bamboo piles and bamboo mats — Akio Takada, Masato Wada, Yuki Odagiri, Kazuhiro Tsurugasaki
11:00 — 11:15	The characteristics of soft clay for ground improvement distributed at Patimban port development area in Indonesia — Yoshimitsu Yamada, Tatsuru Aoyama, Ryota Mizuno, Aditya Karya
11:15 — 11:30	Liquefaction and undrained cyclic behaviour in fully and partially saturated sands — Fausto Molina-Gómez, António Viana da Fonseca, Cristiana Ferreira, Bernardo Caicedo
11:30 — 11:45	Assessing the strength and failure mechanism of cement-filled metamorphic rock — Hoang-Khanh Le, Meng-Chia Weng, Thi Kim Thoa Ho
11:45 — 12:00	
12:00 — 13:00	Lunch break
13:00 — 13:15	How to recover soil from mixed wastes? Separability of soil and wastes — Atsushi Takai, Tomohiro Kato, Takeshi Katsumi
13:15 — 13:30	Deep vibro techniques performances and carbon emission savings from selected industrial projects in Vietnam — William Chong, Cao Van Nghia, Kam Weng, Leong
13:30 — 13:45	Effect of fiber material on cyclic behavior of Liquefied Stabilized Soil under cyclic loading — Hung Khac Le, Yukihiro Kohata, Hung Quang Duong
13:45 — 14:00	Biopotential response of plants on irrigation, wind, and tensile stimuli — Rina Takeda, Kiyonobu Kasama, Zentaro Furukawa
14:00 — 14:15	Research and application of key technologies in high-speed high-pressure stirring spray composite pile — Song Weijie
14:15 — 14:30	Applications of DMT/SDMT test results in ground improvement — Sara Amoroso

List of Poster Presentations

- P-01 Fundamental study on stress evaluation of pile using optical fiber sensors
— A. Nakazato, K. Watanabe, T. Ozama, D. Yamashita
- P-02 Influence of the pulling-out of the temporary sheet pile wall on the adjacent pile foundation in clay
— N. B. Nguyen, T. S. Ha, Y. H. Park, D. J. Yoo
- P-03 On the preparation and assembly of the TBMs for Metro Line No. 3 project, Hanoi
— H. P. Luu, Q. T. Trinh, V. Q. Nguyen
- P-04 Investigation of the effects of seepage from excavation pit on surrounding environment and numerical simulation study
— Y. Zheng, X. Xu, R. Li
- P-05 Design and lesson-learnt of the eco-friendly bamboo pile foundation in soft soil - A case study in Patimban deep seaport
— P. D. Le, R. Mizuno, W. Trihadi St, T. T. Nguyen
- P-06 Seasand used for foundation pit backfill: A case study of the southern breakwater for the channel route of large ships entering the Hau River in Tra Vinh province, Vietnam
— H. S. Nguyen, T. V. Bui, T. T. Huynh
- P-07 An experimental study on Vietnam's circulating resources including fly ash for soil mixing method
— J. H. Park, K. W. Lee, M. D. Hoang, P. L. Le, W. G. Yoo, S. G. Seo
- P-08 Dynamic behavior and the undrained shear characteristics of biomass mixed soil
— T. Yoshizaki, T. Hyodo, N. Tatta, S. Uchida
- P-09 Effective soil stabilisation solution for windfarm development in Southern Vietnam
— V. C. Pham, H. D. Ngo, J. J. Lau
- P-10 Geotechnical design of offshore monopiles: enhancing efficiency and expanding analytical scope
— R. Saturin and M. Nguyen
- P-11 Field trials of suction-assisted installation of circular steel pipe cofferdam in silty sand
— J. H. Lee, J. H. Kim, J. H. Park
- P-12 Numerical analysis for failure envelopes of shallow suction caisson underwater
— S. Kang, T. H. P. Nguyen, D. Lee, B. Bae, J. Ahn
- P-13 A simulation of Lightweight Deflectometer operation to investigate influences of its design on soil modulus of elasticity
— T. Nguyen, Y. Lee, Y. Lee, J. Ahn
- P-14 A study on thermal-mechanical coupling behavior of foliated metamorphic rocks
— M. T. Pham, H. K. Le, M. C. Weng, W. H. Wu
- P-15 Porothermoelastic model for analysis of stress state around wellbores in anisotropic rock
— N. H. Tran, D. T. Pham, D. T. Pham
- P-16 Bridge condition survey of critical bridges in the Philippines
— R. Garcia, L.A. Morillo, P. A. Selda, J. A. Rivera
- P-17 Reinforcing a collapsed slope with a combination of complex geotechnical structures: a case study in Ha Long, Vietnam
— T. A. Pham, V. A. Pham, T. T. Le

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