1st India-Japan-Korea Trilateral Joint Geotechnical Workshop

hosted by

Japanese Geotechnical Society (JGS)

Date: May 11 (Saturday), 2024

Venue: Research Bldg. No 4, Main Campus, Kyoto University

Program:

Time	Room A	Room B
09:20 - 9:40	**Opening address**	
9:40 - 10:20	**Keynote lecture I** Takeshi Katsumi (Kyoto University) Marginal Soils – Geoenvironmental Challenges and Opportunities	
10:30 - 11:10	**Keynote lecture II** Ashish Juneja (IIT Bombay) Effects of sand compaction pile installation in soft clay	
11:20 – 12:00	**Keynote lecture III** Duhee Park (Hanyang University) Recent advances in prediction of site amplification for shallow bedrock sites	
11:50 - 13:00	*Lunch*	
13:00 - 14:30	Session A1 **Numerical analyses & Artificial intelligence**	Session B1 **Soil improvement & Environmental issues**
14:30 - 15:00	*Break*	
15:00 - 16:45	Session A2 **Laboratory testing & Field investigation**	Session B2 **Dynamic response of soils**
16:45 - 17:00	**Closing address**	

17:30 - 19:30 **Reception** (Voluntary)

Restaurant: Camphora (located in the main campus of Kyoto University)

A1 **Numerical analyses & Artificial intelligence** Time: 13:00 - 14:30

Chair: Ilhan Chang & Kazunori Fujisawa

Automated information extraction of construction documents

Jin-Tae Han, Eomzi Yang & Byeong-Soo Yoo*

Variational multiscale FEM for surface-subsurface coupled flow problems in geomechanics

Vikas Sharma & Kazunori Fujisawa*

Finite element slope stability analysis of embankments constructed using soil partially replaced with bagasse

Jithin P Zachariah & Ravi S Jakka*

Introduction of Bayesian optimization technique for parameter identification in liquefaction analysis calibration phase

*Choi Gyuchan**

Inverse analysis of surface infiltration based on observations of pore water pressure in laboratory soil tank

*Taichi Sato**

Heat transfer in coil-column unit as a ground heat exchange using Fiber Bragg Grating sensors and numerical analysis

*Young-sang Kim**

B1 **Soil improvement & Environmental issues** Time: 13:00 - 14:30

Chair: Adimoolam Boominathan & Kiyonobu Kasama

Utilization of CO2-fixed magnesium carbonate as a geomaterial

*Hailong Wang**

Soil reinforced method using biopolymer solutions

*Jongwon Jung**

Hydraulic and sorption performance of active geocomposite for geogenic contamination

*Tomohiro Kato**

Changes in swelling and permeability properties of bentonite by chronological time scale cementation effect

*Daichi Ito**

Applicability of bentonites for the safe and long-term containment of solidified mercury waste

*Lincoln Gathuka**

Geotechnical Engineering contributing to Energy Policy and Global Environment

*Hideo Komine**

A2 **Laboratory & Field investigation** Time: 15:00 - 16:45

Chair: Jongwon Jung & Satoshi Nishimura

An efficient digital image processing technique for estimating void ratio of soils
Bal Krishna Maheshwari & Gowtham Padmanabhan*

Thermo-mechanical behaviour of peats under 1-D compression
*Taishi Kochi**

Analysis of resistance mechanisms and countermeasures of pipe uplift during liquefaction
*Hyukkee Hong**

Applications of biopolymer-based soil treatment (BPST) technology in sites to strengthen earthen levee structures' resistance to internal and external erosion manners
*Ilhan Chang**

Field investigation of expanded polystyrene (EPS) as inclusion material behind a cantilever retaining wall
Dasaka Satyanarayana Murty & Vikas S. Patil*

Application of IoT soil moisture sensor with detection of submersion to steep slope
*Kiyoshi Omine**

Porosity evaluation of soft soils using field velocity resistivity probe
Jong-Sub Lee, Woojin Han & Namsun Kim*

B2 **Dynamic response of soils** Time: 15:00 - 16:45

Chair: Bal Krishna Maheshwari & Kenichi Kawano

Synergizing seismic insights: Exploring the dynamic response of reinforced slopes incorporating commercial and in-house 3D printed geocells
*Sureka S & Arindam Dey**

Influence of compaction conditions on the liquefaction characteristics of pumice sand with a high contents of non-plastic fines
*Yoichi Watabe**

Geotechnical Seismic Isolation (GSI) system with geogrid reinforcement
Adimoolam Boominathan, S. Banerjee & J.S. Dhanya*

Differential settlement of adjacent buildings due to liquefaction
*Mizuki Kunisawa**

Centrifuge modeling of geogrid-reinforced soil walls under integrated earthquakes and seepage Conditions
*Phyo Thi Han**

Assessments of liquefactions and ground settlements for the 2017 M5.5 Pohang, South Korea, earthquake
Byungmin Kim, Hwanwoo Seo & Juseung Ryu*

Geotechnical characterization and conceptual design for the development of a greenfield port at Tadadi, Karnataka, India
*Anil Joseph**