29th European Safety and Reliability Conference

Hannover, Germany, 22 - 26 September 2019

TC304 Student Competition

Date: 22 September 2019 (Sunday)

Time: 9:30-1630

Venue: Senatssaal, Room F335 (see map below)

TC304 meeting

Date: 23 September 2019 (Monday)

Time: 2:00 – 4:00 pm

Venue: Senatssaal, Room F335 (see map below)

TC304 special session: Geotechnical risk, reliability, and data analytics

Date: 24 September 2019 (Tuesday)

Session 1 - 11:30 to 12:50

Session 2 -14:00 to 15:20

Venue: To be confirmed

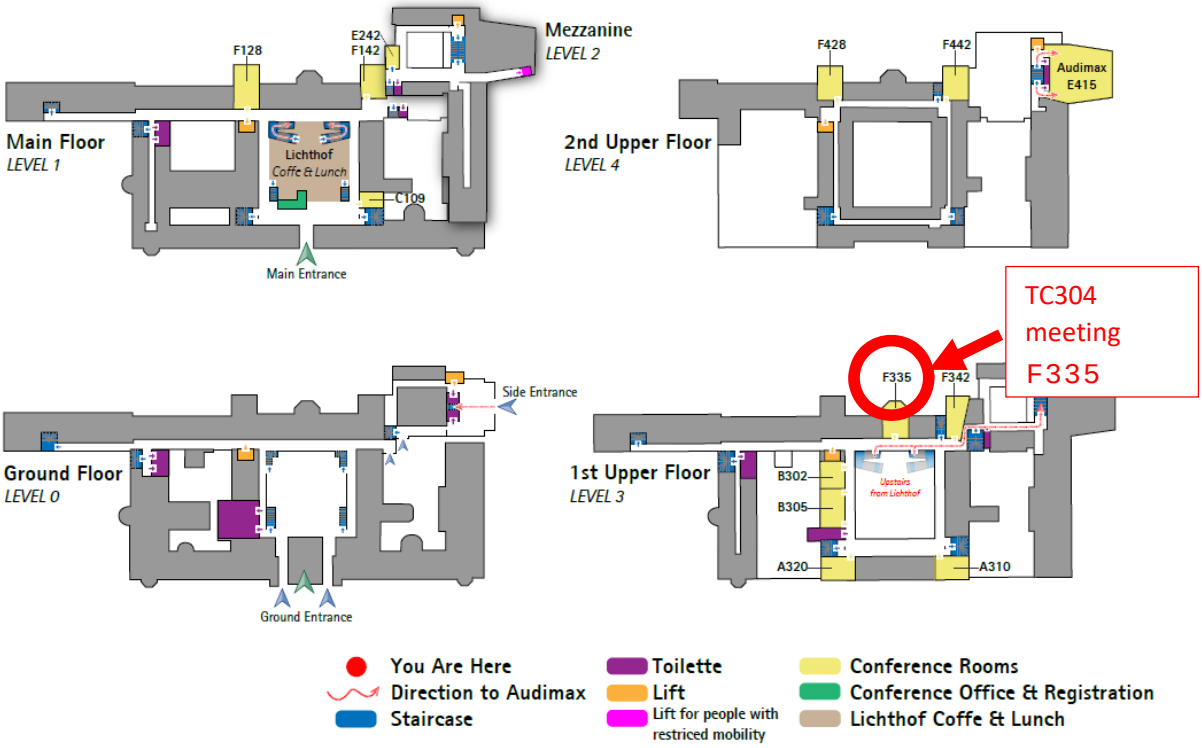
Sponsored by: TC304 (Engineering Practice of Risk Assessment & Management), International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)

Organizers: Jianye Ching and Kok-Kwang Phoon

This session focuses on the characterization of uncertainties and variabilities encountered in geotechnical engineering, such as the inherent spatial variability of ground properties, uncertainty in subsurface stratigraphy when interpreting limited site investigation data, and model uncertainty, as well as effective and efficient analysis/design approaches to assure performance in the face of these uncertainties and variabilities. The two distinctive features in geotechnical engineering are the use of natural non-engineered geo-materials and no two sites are perfectly identical. Both practical applications for reliability-based design code calibration and quantitative risk assessment and novel methodological developments including emerging areas such as machine learning and artificial intelligence are included.

MAP of the Welfenschloss

Main Building



Senatssaal, Room F335

TC304 Student Competition

Date: 22 September 2019 (Sunday)

Venue: Senatssaal, Room F335

Session Program (15' presentation + 5' Q&A)

Time	Sunday, Sept 22
9.30 - 9.50 a.m.	**An Integrated Optimization-Game Theory Model for CPT-based Subground Stratification** (M.S. Farhadi)
9.50 - 10.10 a.m.	**Analysis of underground stratification based on CPTu profiles using high-pass spatial filter** (J. Rainer & H. Szabowicz)
10.10 - 10.30 a.m.	**CPT-based Underground Stratification by Cluster Analysis** (M.C. Kuo)
10.30 - 10.50 a.m.	**Bayesian Approach for Soil Stratification Using Reversible Jump Markov Chain Monte Carlo** (Cong Miao, Luyu Ju & Shuo Zheng)
10.50 – 11.30 a.m.	**Tea and Coffee break**
11.30 - 11.50 a.m.	**A study on data mining analysis for soil stratification using cone penetration test data** (S.H. Cho & B.H. Cho)
11.50 - 12.10 p.m.	**Application of an Artificial Neural Network for the CPT-based Soil Stratigraphy Classification** (S. Bertelli)
12.10 - 12.30 p.m.	**Hybrid Statistical Method for underground Stratification Based on CPT Profiles** (M. Lenchenko & Y. Shen)
12.30 - 12.50 p.m.	**Stratigraphic Profiling using Sparse Modeling** (Y. Tsuda & M. Kagehira)
12.50 – 15.30 p.m.	**Lunch time + Judging panel meeting**
15.30 – 16.30 p.m.	**Award ceremony & instructions for participating in the Student Contest Special Issue on Studia Geotechnica and Mechanica**