



Technical e-Forum on Machine Learning and Big Data analysis on Tunneling and Tunnel Mechanics

July 1, 2021 (UTC +8), Online

Host

International Society for Soil Mechanics and Geotechnical Engineering Technical Committee 309

Engineering Risk and Insurance Research Branch of China Civil Engineering Society

Tongji University

Chair

Dr. Zhongqiang Liu (Chair of ISSMGE TC309)

Secretary (Contact)

Prof. Dongming Zhang (Secretary of ISSMGE TC309 09zhang@tongji.edu.cn)

Speakers / 报告人



Prof Hongwei Huang
Tongji University, China



Prof Yu Wang
City University of Hong
Kong, China



Prof Wengang Zhang
Chongqing University,
China



Prof Bin Liu
Shandong University,
China



Prof. Xu Li
Beijing Jiaotong
University, China



A/Prof Yadong Xue
Tongji University, China



A/Prof Jian Chen
Huazhong University of
Science and Technology,
China



Dr. Zili Li
University College Cork,
Ireland



Mr. Tom F. Hansen,
Norwegian Geotechnical
Institute



Mr. Dayu Apoji
UC Berkeley, USA



Mr. Georg Erharter,
Graz University of
Technology

Date & Meeting Link / 时间和会议链接:

Date: 2021-7-1 (UTC+8)	ZOOM Meeting ID: 89870315589 Meeting Link: https://us02web.zoom.us/j/89870315589 Meeting Password: 209877
------------------------	---

Time (UTC+8)	Speech Title	Speaker	Chair
17:10-17:20	Opening Ceremony	<i>Zhongqiang Liu</i>	<i>Dongming Zhang</i>
17:20-17:45	Computer-Vision-Based(CVB) Safety Risk Assessment on Rock Tunnel	<i>Hongwei Huang</i>	<i>Chunlin Li</i>
17:45-18:10	Dynamic development of subsurface geological cross-section along tunnel alignment from limited boreholes using iterative convolutional neural network	<i>Yu Wang</i>	
18:10-18:35	Application of Machine Learning & Soft Computing in Prediction of Tunneling Responses and Optimization of Tunnel Boring Machines	<i>Wengang Zhang</i>	<i>Yu Wang</i>
18:35-19:00	Research Progress of geological forward prospecting and intelligent decision of drilling parameters in hard-rock TBM tunneling	<i>Bin Liu</i>	
19:00-19:05	<i>break</i>		
19:05-19:30	Rock breaking indexes based on TBM real-time boring data	<i>Xu Li</i>	<i>Zili Li</i>
19:30-19:55	Deep learning model for prediction of temporal and spatial characteristics of geological structural in rock tunnel engineering	<i>Yadong Xue</i>	
19:55-20:20	Digitalized cutterhead management for super-size shield tunnelling in composite ground conditions	<i>Jian Chen</i>	<i>Tom F. Hansen</i>
20:20-20:45	Automated Crack Classification for Tunnel Infrastructure Using Deep Learning	<i>Zili Li</i>	
20:45-21:10	Reinforcement learning based process optimization and strategy development in conventional tunneling	<i>Georg Erharder & Tom F. Hansen</i>	<i>Dongming Zhang</i>
21:10-21:35	Random Forests for Soil Classification based on EPBM Data	<i>Dayu Apoji</i>	
21:35-21:45	Forum Summary	<i>Hongwei Huang</i>	

