

# TECHNICAL PROGRAM

(Nov. 20~22, 2017, Chutian International Hotel, Wuhan, China)

Nov.20 Afternoon		
12:00~21:00	Registration (Venue: lobby)	
18:00~21:00	Buffet dinner (Venue: Xiangxie Hall)	
Nov.21 Morning		
Opening Ceremony [Chair: Quansheng LIU]		
Venue: ChuTianGong Hall		
08:30~09:00	<b>Quansheng LIU</b> , Organizing Committee Chair of TBM DiGs 2017 <b>Fei LI</b> , Vice-president of Wuhan University <b>Jian ZHAO</b> , Scientific Committee Chair of TBM DiGs 2017 <b>Giovanni BARLA</b> , Professor of polytechnic university of Turin, Italy <b>Zuyu CHEN</b> , Academician of the Chinese Academy of Sciences	
09:00~09:20	Photographing (Venue: Hotel Gate)	
Keynote Lectures [Chair: Jian ZHAO, Nick BARTON]		
Venue: ChuTianGong Hall		
09:20~09:50	Contribution to the understanding of subsidence during TBM excavation of a twin tunnel in difficult ground	Giovanni BARLA
09:50~10:20	Advance detection and prediction of unfavorable geological condition in TBM tunneling	Shuca LI
10:20~10:35	Tea break	
Invited Lectures [Chair: Quansheng LIU, Jamal ROSTAMI]		
Venue: ChuTianGong Hall		
10:35~10:55	Study on the rock breakage and wear of TBM disc cutter in high strength and high abrasive strata	Kairong HONG
10:55~11:15	TBM performance prediction using laboratory cutting tests in very hard and abrasive rock formations	Nuh BILGIN

11:15~11:35	Electromechanical coupling vibration mechanism and anti-vibration design of TBM under multi point impact excitation	Junzhou HUO
11:35~11:55	Selection and Application of Double Shield TBM for Metro Tunnel	Dujuan WANG
11:55~14:00	Lunch (Venue: Xiangxie Hall)	
Nov.21 Afternoon		
<b>Keynote Lectures [Chairperson: Giovanni BARLA, Shucui LI]</b>		
<b>Venue: ChuTianGong Hall</b>		
14:00~14:30	Soft Ground TBM Tunnelling	Michael MOONEY
14:30~15:00	Behavior of rock fragmentation by TBM cutters under high confining pressure and guide to TBM tunneling in deep mixed formations	Quansheng LIU
15:00~15:15	Tea break	
<b>Oral presentations [Chairperson: Michael MOONEY, Qiuming GONG]</b>		
<b>Venue: ChuTianGong Hall</b>		
15:15~15:30	Assessing the impact of most significant parameters on required thrust force in tunneling through difficult grounds	Jamal ROSTAMI
15:30~15:45	The 3D numerical simulation of rock fragmentation by one TBM disc cutter under the different confining stress	Xiaoping ZHOU
15:45~16:00	First road tunnel beneath the bosphorus strait - extremely challenging project in terms of engineering technology	Thorsten Tatzki
16:00~16:15	TBM-block interaction during TBM tunneling in rock masses: block behavioristics and the dynamic features	Zixin ZHANG
16:15~16:30	Effect of rock abrasiveness on slurry shield tunneling	Seungmo SON
16:30~16:45	Analysis on the Effects of Geological Conditions and Cutter Layout on TBM Disc Cutter Wear	Yadong XUE

16:45~17:00	Numerical simulation and analysis of deformation and failure mode of underlying surrounding rock of TBM gripper	Tao LI
17:00~17:15	TBM tunneling in the urban center of Hong Kong	Guy BRIDGES
17:15~17:30	Performance of slurry TBM tunneling in sandy cobble ground – a case study in Lanzhou	Yong FANG
17:30~17:45	Tunneling between the Sydney harbor heads to expand the city's rail network	Ted NYE
17:45~18:00	Influences of joint orientation and spacing on cutting forces and penetration during rolling boring process	Haiqing YANG
19:00~21:00	Banquet (Venue: ChuTianGong Hall)	
<b>Nov.22 Morning</b>		
<b>Keynote Lectures [Chairperson: Nuh BILGIN, Yuyong JIAO]</b>		
<b>Venue: ChuTianGong Hall</b>		
08:30~09:00	TBM in Difficult Rock Conditions	Nick BARTON
09:00~09:30	Design and Manufacture Key Technologies and Applications of Non-circular TBM	Jianbin LI
09:30~10:00	New Technologies Assisting Hard Rock Cutting of Tunnel Boring Machines	Jian ZHAO
10:00~10:15	Tea break	
<b>Invited Lectures [Chairperson: Thorsten Tatzki, Xiaoping ZHOU]</b>		
<b>Venue: ChuTianGong Hall</b>		
10:15~10:35	Discussion on development of hard rock TBM Technology	Yongliang CHENG
10:35~10:55	Experiences of TBM Tunneling in Shaft Coal Mine: A Case Study	Yongzhi TANG & Bin TANG
10:55~11:15	Some New Tests for Rock fragmentation under TBM Cutter by BJUT Mechanical Rock Breakage Experimental Platform	Lijun YIN

11:15~11:35	Study on the stress field evolution and test technology of TBM tunnelling in deep buried tunnels	Hui ZHOU
11:35~11:55	Technology of Long Coal Mine Inclined Tunnel Construction by TBM	Xudong ZHANG & Mingtan XIA
11:55~14:00	Lunch (Venue: Xiangxie Hall)	
Nov.22 Afternoon		
<b>Oral Presentations [Chairperson: Dajuan WANG, Zixin ZHANG]</b>		
<b>Venue: ChuTianGong Hall</b>		
13:45~14:00	Research on the method of detecting boulder stratum with shield tunneling parameters	Jingbo GUO
14:00~14:15	Challenges of excavation through mixed-face grounds by hard rock TBMs: the case study of Kerman water conveyance tunnel	Roohollah Narimani Dehnavi
14:15~14:30	Development and application of TBM monitoring platform based on 'Internet+' and big data analyses	Yusheng JIANG
14:30~14:45	The research progress and prospect of Tunnel-Seismic-While-Drilling method for ahead geological prospecting in TBM tunneling	Bin LIU
14:45~15:00	Prediction and analysis of abrasiveness of dense sandy strata by slurry shield TBM at Sutong GIL Utility Tunnel Engineering	Xiaoping ZHANG
15:00~15:15	Technical feasibility study on using TBM in construction of Underground Research Laboratory for China's HLW disposal	Hongsu MA
15:15~15:30	Soil conditioning for EPB shield tunneling in clayey ground	Shuying WANG
15:30~15:45	Challenges of TBM excavation in a deeply buried water-conveyance tunnel: squeezing, rock burst and high geo-temperature	Jimin HUANG

15:45~16:00	Tea break	
<b>Oral presentations [Chairperson: Hui ZHOU, Yusheng JIANG]</b>		
<b>Venue: ChuTianGong Hall</b>		
16:00~16:15	TBM disc cutters in the field: extreme tunnel conditions inform the latest cutting tool advancements	Jian ZHANG
16:15~16:30	Influence of free face direction on rock breaking by TBM disc cutters	Qi GENG
16:30~16:45	Simulation and analysis in 3D of TBM disc cutters collaborative rock fragmentation patterns	Hanxiang ZHAO
16:45~17:00	Development and in-situ application of a real-time monitoring system for the interaction between TBM and surrounding rock	Xing HUANG
17:00~17:15	Investigation of Rock Bolting for Deeply Buried Tunnels Via a New Efficient Hybrid DEM-Analytical Model	Guo XIAO
17:15~17:30	Transparent soft rock test for simulation of TBM tunneling in squeezing ground	Shuo YANG
17:30~17:45	Comprehensive performance evaluation method of mucking structure for TBM cutterhead	Mei YANG
17:45~18:00	Three-dimensional discrete element numerical simulation of rock fragmentation by TBM cutters based on MatDEM	Bing LIU
18:00~18:15	Research on the correlation between machine hydraulic information and penetration rate of TBM	Hua LUO
18:15~18:30	Discussion and Closing Ceremony	
18:30~21:00	Buffet dinner (Venue: Xiangxie Hall)	
<b>Nov. 23 Technical Visit</b>		
07:30~11:30	Sanyang Road tunnel, Wuhan, Hubei	
06:30~13:00	Rectangular TBM construction site, Zhengzhou, Henan	