



## Workshop Tongji- SFB837-UCC- ACTUE-UC Berkeley

**August 27<sup>th</sup> Thursday 2020 – Workshop: Recent Advances in Tunneling**

**(University College Cork, Ireland – Ex ordo Online Platform)**

Local Ireland time zone (GMT+1), Germany time zone (GMT+2), China time zone (GMT+8), California time zone (GMT-7)

<b>10:30 – 10:40</b>	<b>Opening Address / Dr. Zili Li</b>
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<b>10:40 – 12:00</b>	<b>Session 1 / Chairman: Prof. Xian Liu / Dr. Jiaolong Zhang – Tongji University</b>
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- Long-term structural performance of CERN ageing tunnel  
*Dr. Zhipeng Xiao – University College Cork*
- Sustainable Tunnelling: The Need of a Sustainable Mass Transit Rating System  
*Diana Diaz-Matta – Tongji University*
- Online-Controlling of an Agent-Based Simulation Model of Mechanised Tunnelling Jobsite.  
*Yara Salloum – Ruhr-University Bochum*
- In-site Investigation on Mechanical Behaviour of the Column-free Quasi-rectangular Shiled Tunnel During Column-unloading Process  
*Zhen Liu – Tongji University*

<b>12:00 – 13:40</b>	<b>Meal break</b>
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<b>13:40 – 15:00</b>	<b>Session 2 / Chairman: Prof. Gunther Meschke / Dr. Steffen Freitag – RUB</b>
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- Interaction of Cutting Disc with Heterogeneous Ground  
*Sahir Butt – Ruhr-University Bochum*
- Characteristics analysis on progressive collapse of segmental tunnel linings based on accident cases  
*Qihao Sun – Tongji University*
- MSAC: A Concept to Automatically Distinguish “Regular Advance” from “Hindered/Exceptional Advance” in TBM Tunnelling  
*Thomas Marcher – Graz University of Technology*
- Simulation of Tunnel Advancement: Beyond the Finite Element Method  
*Hoang-Giang Bui – Ruhr-University Bochum*

<b>15:00 – 15:20</b>	<b>Coffee break</b>
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15:20 – 16:40

Session 3 / Chairman: Prof. Thomas Marcher – Graz University of Technology

- ThermoCluster-A Study on Potential Heat Recovery from Deep Tunnels for the Use in Smart Cities  
*Thomas Geisler – Graz University of Technology*
- Electrical Resistance Measurements of Materials Relevant in Tunnelling to Detect Porosity and Particle Deposits in Non-cohesive Soil  
*Sebastian Kube – Ruhr-University Bochum*
- Automated Crack Classification for Underground Tunnel Infrastructure Using Deep Learning  
*Darragh O'Brien – University College Cork*
- Integrating Domain Knowledge with Deep Learning Models: An Interpretable AI System for Automatic Work Progress Identification of NATM Tunnels.  
*Renjie Wu – University of California, Berkeley*

16:40 – 16:50

Discussion & Closing – Dr. Zili Li

This tunnel workshop is a mini-symposium of the biennial Civil Engineering Research Ireland (CERI) Conference 2020, Cork, Ireland. <http://www.cerai.net/> and receives support from Irish Centre for Research in Applied Geosciences (iCRAG). <https://www.icrag-centre.org/>

