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RUHR UNIVERSITY BOCHUM

SFB 837 - Interaction Modeling in Mechanized Tunneling

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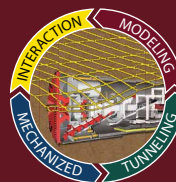
– JOINT WORKSHOP –

MECHANIZED TUNNELING IN SOFT GROUND

MAY 4TH, 2019

WTC 2019 – MOSTRA D'OLTREMA, NAPLES
SPECIAL DISCUSSION MEETING

Chairmen: Prof. Adam Bezuijen, University Ghent;
Dr. Britta Schöber, Ruhr University Bochum



SFB 837

Interaction Modeling in
Mechanized Tunneling

SIMSG ISSMGE



TC204 –
UNDERGROUND
CONSTRUCTION

International Society for Soil Mechanics
and Geotechnical Engineering



MECHANIZED TUNNELING IN SOFT GROUND

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Since 2011, the SFB 837 has established a continuous collaboration „Recent Advances in Tunneling and Underground Space Research“ with various international academic partners. Among other research institutions, this includes the IKC Cambridge, UK; the Tongji University Shanghai, China; the ACTUE-Group, Austria; the Colorado School of Mines, USA; the Sapienza University of Rome, Italy and the University of Cork, Ireland.

This year, the joint workshop is combined with the Technical Committee 204 “Underground Construction in Soft Ground” of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and will be integrated into the World Tunneling Congress (WTC 2019) in Naples, Italy. Currently, the workshop is organized by Prof. Dr. ir. Adam Bezuijen, Ghent University, Belgium, and Dr.-Ing. Britta Schößler, SFB 837 sub-project manager, Ruhr University Bochum, Germany.

Besides, multilateral doctoral workshops took place in Cambridge (2012), Tongji (2012), Bochum (2013), Shanghai (2014 & 2018 at the GeoShanghai International Conference), Salzburg (2015) as well as in Innsbruck (2017).

MAY 4TH, 2019 – 10:00 - 16:00

- 10:00 *Opening and General Overview*
- 10:10 **Modelling Mechanised Tunnelling in Urban Areas: Matching Requirements and Avoiding Potential Errors**
Elena Chiriotti
INCAS Partners
- 10:30 **Feeling the Muck: a Step Towards Automation**
Daniela G. de Oliveira
Herrenknecht AG
- 10:50 **The Face Support Pressure in Tunnelling with TBM-EPB: on Site Measurements and Conditioned Soil Properties**
Diego Sebastiani, Salvatore Miliziano
Sapienza University of Rome
- 11:10 *Coffee Break*

MAY 4TH, 2019 – 10:00 - 16:00

- 11:30 **Dealing with Soft Ground Situations in Segmental Lining Design**
Benno Ring
Ring - Consultancy in Tunnelling
- 12:00 **Robust Design of Hybrid Steel Fiber Reinforced Concrete Tunnel Lining Segments**
Gerrit Neu, Günther Meschke
Ruhr University Bochum
- 12:30 *Lunch*
- 13:30 **Eulerian Analyses of Mechanised Tunnel Excavation**
Nunzio Losacco
Sapienza University of Rome
- 13:50 **Experimental Investigation of the Flow Behaviour of Conditioned Soils for EPB Tunnelling in Closed Mode**
Sascha Freimann, Markus Thewes
Ruhr University Bochum
- 14:10 **Influence of Conditioning and its Time Decay on the Geomechnic Behavior of Soil**
Andrea Carigi, Daniele Martinelli
Politecnico di Torino
- 14:30 *Coffee Break*
- 14:50 **Cutterhead Torque Components and Estimation Approaches for TBM Design in Softground Tunnelling**
Kathrin Glab
Herrenknecht AG
- 15:20 **Data Driven Modeling of EPB TBM Performance**
Mike Mooney
Colorado School of Mines
- 15:50 *Closing remarks*