

# TUNNELING FUNDAMENTALS, PRACTICE AND INNOVATIONS

SEPTEMBER 18-21, 2017 :: GOLDEN, COLORADO

## WORKING AGENDA

### MONDAY, SEPTEMBER 18

#### PLANNING, GEO, RISK

- 8:00-8:45 Overview of the Course and the Global Tunneling Scene**  
Mike Mooney, Professor and Grewcock Chair of Underground Construction and Tunneling, Colorado School of Mines
- 8:45-9:45 Tunnel Project Planning: From Conception through Construction and Operation**  
Gordon Clark, Vice President and Director for Tunnels and Complex Underground Structures, HNTB
- 10:00-11:00 Geological and Geotechnical Site Investigation and Characterization including GDRs**  
Red Robinson, Senior Vice President, Shannon & Wilson Inc.
- 11:00-12:00 Risk Management**  
Bob Goodfellow, Senior Vice President, Aldea Services  
Mike DiPonio, Vice President, Jay Dee Contractors, Inc

#### RISK AND CONTRACTING FUNDAMENTALS

- 1:00-1:45 Contracting Methods and Project Delivery Options**  
Dan Adams, President, McMillen Jacobs Associates
- 1:45-2:30 Geotechnical Baseline Reports**  
Randy Essex, Executive Vice President, Mott MacDonald
- 2:30-3:15 Risk Management through Instrumentation and Monitoring**  
Allen Marr, CEO, Geocomp
- 3:30-5:30 Hands-On Labs**
- 5:30-7:00 Geology Museum Reception**

### TUESDAY, SEPTEMBER 19

#### HARD ROCK TUNNELING

- 8:00-9:00 Openings and Support in Rock and Soil**  
Seth Pollak, Associate, Arup  
Gabe Walton, Assistant Professor of Underground Construction and Tunnel Engineering and Geological Engineering, Colorado School of Mines
- 9:00-10:00 NATM and SEM**  
Vojtech Gall, Principal, Gall Zeidler Consultants  
Nasri Munfah, Senior Vice President and Director of Global Tunneling, WSP
- 10:15-11:00 Conventional Excavation: Drill and Blast and Roadheaders**  
Matt Kendall, Project Manager, Frontier-Kemper Constructors, Inc.
- 11:00-11:45 Shotcrete Temporary and Permanent Lining Design and Construction**  
Wolfgang Aldrian, Director of Corporate Business Development, BASF Corporation  
Hyuk-il Jung, Associate and UKMEA Tunnel Skills Network Leader, Arup
- 11:45-12:15 Building Stations from Pilot Tunnels: Innovation from Crossrail London**  
Juergen Laubbichler, Managing Director, Dr. Sauer & Partners
- 1:00-1:45 Principles of Hard Rock TBM Tunneling**  
Jamal Rostami, Associate Professor and Hadden/Alacer Gold Endowed Chair in Mining Engineering, Colorado School of Mines
- 1:45-2:30 Innovations and Trends in Hard Rock TBM Tunneling**  
Dennis Ofiara, Chief Engineer, The Robbins Company
- 2:30-3:15 Probe-Hole Drilling and Pre-Excavation Grouting for Groundwater Control**  
Niels Koefed, Tunnel Manager, Rondout, Kiewit
- 3:30-5:30 Hands-On Labs and Demos**
- 5:30-7:00 Reception and Mines Research Poster Session**

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WEDNESDAY, SEPTEMBER 20

SOFT AND MIXED GROUND TUNNELING

- 8:00-8:45**      **Principles of Pressurized Face TBM Tunneling: EPB, Slurry and Hybrid**  
Mike Mooney, Colorado School of Mines
- 8:45-9:30**      **Application, Design and Performance of EPB, SPB and Hybrid TBMs**  
Werner Burger, Chief Engineer, Herrenknecht AG
- 9:30-10:15**      **Innovative TBM Tunneling in Hong Kong: From Small TBMs for Cross Passage Construction to the 17.6m Largest Mixshield TBM in the World**  
Bruno Combe, Director of Tunneling, Bouygues Construction  
Roger Storry, Technical and Risk Manager, Dragages Hong Kong Limited
- 10:30-11:00**      **Learning from Data**  
Speaker(s) to be announced
- 11:00-11:30**      **Prediction of Tunnel-Induced Deformation of Ground, Buildings and Utilities**  
Vera Nasri, Chief Tunnel Engineer and Vice President, AECOM
- 11:30-12:00**      **SR99: Lessons from the Largest EPB TBM Tunnel in the World**  
Chris Dixon, Project Manager, Seattle Tunnel Partners  
Juan Luis Magro, Construction Manager, Dragados USA and Seattle Tunnel Partners
- 1:00-1:45**      **Precast Segmental Liner Design and Construction**  
Anthony Harding, Regional Practice Leader, Tunnels and Earth Engineering, CH2M
- 1:45-2:45**      **Ground Improvement: Dewatering to Ground Freezing to Grouting**  
Paul Schmall, Senior Vice President and Chief Engineer, Moretrench  
Tanner Blackburn, Chief Engineer, Hayward Baker
- 2:45-3:15**      **Regional Connector: TBM Tunneling, Deformation Control, Cross Passages and the Cavern**  
Eren Kusdogan, Tunnel Engineer, Traylor Bros., Inc.
- 3:30-5:30**      **Hands-On Labs and Demos**

THURSDAY, SEPTEMBER 21

PROJECT DELIVERY

- 8:00-8:30**      **Safety Design and Delivery**  
Matt Swinton, Senior Vice President and District Manager, Kiewit
- 8:45-9:30**      **Construction Management**  
Greg Colzani, Tunnel Construction Management Leader, Jacobs
- 9:30-10:15**      **Cost Estimating**  
Speaker(s) to be announced
- 10:15-12:00**      **Owners Panel: Specifications, Risk Sharing and the Future of Procurement**  
*Planning and Management Approach for the Bay Delta Tunnels*  
John Bednarski, Southern California Metropolitan Water District  
*Factors that Drive the LA Metro Technical Requirements for Underground Construction*  
Matthew Crow, Los Angeles Metro  
*Achieving Success for All Parties: Balancing Risk and Opportunity through Specifications*  
Matt Preedy, WSDOT (formerly) and Sound Transit