

Shotcrete for Underground Support XIII

September 3-6, 2017
Kloster Irsee, Irsee, Germany

Conference Chair:

Dietmar Mähner
FH Münster, Germany

Conference Co-Chairs:

Matthias Beisler
ILF Consulting Engineers, Thailand

Frank Heimbecher
FH Münster, Germany



Engineering Conferences International

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Sunday, September 3, 2017

16:30 - 18:00	Conference check-in
18:00	Dinner
19:30	Concert by organist Roland Götz on historic organ
21:00	Social period

Monday, September 4, 2017

- 07:30 – 09:00 **Breakfast buffet**
- 09:00 - 09:30 **Conference Opening/Welcome Talks**
Prof. Herbert Klapperich, ECI-Liaison
Prof. Dietmar Mähner, Conference Chair
Prof. Tarcisio Celestino, President, ITA
Prof. Conrad Boley, DGGT - German Geotechnical Society, Head of the "Rock Mechanics" Division
Rusty Morgan, Canada. Past-Chair ECI-SUS X
Guojun Li, Singapore, Past-Chair ECI-SUS XII
Preedee Ngamsantikul president of TUTG Thailand Underground & Tunneling Group
- 09:30 - 10:00 **Multi layered shotcrete design**
Matthias Werner Beisler, ILF Consulting Engineers, Austria
- 10:00 - 10:30 **Tunnel shotcrete lining for hydroelectric projects in British Columbia**
Lihe Zhang, Consulting & Testing Ltd., Canada
- 10:30 - 11:00 Coffee Break
- 11:00 - 11:30 **In situ testing of early age energy absorption in sprayed fiber reinforced concrete - HyEA – test**
Michael Kompatscher, Hagerbach Test Gallery Ltd, Switzerland
- 11:30 - 12:00 **Limitation of strength of sprayed concrete**
Sven Plückelmann, Ruhr University Bochum, Germany
- 12:00 - 12:30 **Understanding the role of accelerators in wet-mix shotcrete**
Ezgi Yurdakul, GCP Applied Technologies, USA
- 12:30 - 14:00 Lunch
- 14:00 - 14:30 **Cellular sprayed concrete for simple and economic remixing**
Kyong-Ku Yun, Kangwon National University, Korea
- 14:30 - 15:00 **Possible applications of a highly ductile sprayed concrete as a measure for ground support and structural upgrade**
Goetz Vollmann, Ruhr-University Bochum, Germany
- 15:00 - 15:30 **Toward a better understanding of the placement of shotcrete: Nozzles and velocities**
Marc Jolin, Laval University, Canada
- 15:30 - 15:45 **TBD**
- 15:45 - 16:15 Coffee Break

Monday, September 4, 2017 (continued)

- 16:15 - 16:30 **Underground support for Xe-Pian Xe-Namnoy hydropower project, Lao PDR - 128**
Chawalit Tanomtin, Right Tunnelling Co., Ltd., Thailand
- 16:30 - 16:45 **Application examples of a very economic way of cellular sprayed concrete on retaining wall and artificial rock**
Kyong-Ku Yun, Kangwon National University, Korea
- 19:30 Dinner followed by social period

Tuesday, September 5, 2017

- 07:30 -09:00 **Breakfast buffet**
- 09:00 - 09:30 **Design approach and verification of single shell lined tunnels**
Thomas Marcher, SKAVA consulting ZT GmbH, Austria
- 09:30 - 10:00 **Structural retrofitting of rescue tunnels in single shell shotcrete construction – requirements and experiences**
Daniel Eickmeier, Federal Highway Research Institute (BASt), Germany
- 10:00 - 10:15 **Production of a waterproofing construction in steel fiber concrete at the railway project Stuttgart 21**
Andreas Schaab, HOCHTIEF Infrastructure GmbH, Germany
- 10:15 - 10:30 **Concrete renovation and enhancing of fire protection of an existing tunnel with spayable polymer cement concrete (SPCC)**
Stefan Peters, IMM, Germany
- 10:30 - 11:00 Coffee Break
- 11:00 - 11:30 **The effects of local voids and imperfections of surrounding rock on the performance of existing tunnel lining**
Jinyang Fu, Central South University, China
- 11:30 - 12:00 **Earth pressure on anchor-shotcrete retaining structures**
Juncheng Gao, Dalian University of Technology, China
- 12:00 - 12:30 **Value engineering in engineering tunnels projects**
Mahmoud Elshourbagy, Taibah University Al-Madina, Saudi Arabia
- 12:30 - 14:00 Lunch Break
- 14:00 - 14:30 **Durable and sustainable shotcrete**
Maria Thumann, OTH Regensburg, Germany
- 14:30 - 14:45 **Determination of trigger levels for SCL and NATM**
Max John, John Tunnel Consult, Austria
- 14:45 - 15:00 **Rock-Support analysis for buckling failure at Cuiabá Mine decline**
Felipe Pereira, AngloGoldAshanti, Brazil
- 15:00 - 15:15 **Structural modifications to hydroelectric turbine draft tube ceiling using accelerated wet-mix steel fiber reinforced shotcrete applied up to 2m thick overhead**
Shaun M. Radomski, Amec Foster Wheeler, Canada
- 15:15 - 15:30 **Application of cellular sprayed concrete into two-lift concrete** Yun, Kyong-Ku Yun, Kangwon National University, Korea
- 15:30 - 16:00 Coffee Break

Tuesday, September 5, 2017 (continued)

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| 16:00 - 16:15 | Spray fibre reinforced concrete – performance criteria and testing method
Benoit de Rivaz, Bekaert Maccaferi Underground Solution, France |
| 16:15 - 16:30 | Why is rheology important for shotcrete and how can it be improved?
Ezgi Yurdakul, GCP Applied Technologies, USA |
| 17:00 | Nature Walk |
| 20:00 | Conference Dinner

Announcement of SUS XIV, 2019 |

Wednesday, September 6, 2017

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| 07:30 – 09:00 | Breakfast buffet |
| 09:00 - 09:30 | Specifying and testing fiber reinforced shotcrete: Advances and challenges
Antoine Gagnon, Laval University, Canada |
| 09:30 - 10:00 | Shotcreting of ultra-high performance concrete
Laurence Trucy, LafargeHolcim, France |
| 10:00 - 10:30 | Innovative shotcrete technologies for durable rapid underground development and infrastructure repairs exposed to severe conditions
Nicolas Ginouse, King Shotcrete Solutions, Canada |
| 10:30 - 11:30 | Properties and function of permanent shotcrete linings waterproofed with bonded membranes
Karl Gunnar Holter, BASF Construction Chemicals Europe AG, Switzerland |
| 11:30 | Lunch and departures |