

Shotcrete for Underground Support XIII

New Developments in Rock Engineering,
Tunneling, Underground Space and Deep
Excavation

An ECI Conference Series Volume 17AQ

Irsee, Germany
3-6 September 2017

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ISBN: 978-1-5108-5563-2

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Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



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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

NOTES

Technical sessions will be in Room 227.

Dinners on Sunday and Monday will be in the cellar. The conference banquet on Tuesday will be in Room 12.

Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless prior permission has been granted by the author and ECI.

Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).

Speakers – Please leave at least 3-5 minutes for questions and discussion.

Please do not smoke at any conference functions.

Turn your mobile telephones to vibrate or off during technical sessions.

Please write your name on your program so that it can be returned to you if lost or misplaced.

After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.

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 - 10:30 **Panel Discussion**
- "SHOTCRETE: Development - methods - design - application / soil-rock"**
- Tarcisio Celestino, President ITA
opening statement
 - Panel
Mark Jolin, Conrad Boley, Bruno Mattle, Wolfgang Kusterle, Rusty Morgan, Götz Vollmann, Jinyang Fu, Martin Eberli, Michael Kompatscher
 - Moderation
Dietmar Mähner, Herbert Klapperich
- 10:30 - 11:00 Coffee Break
- 11:00 - 11:30 **Multi layered shotcrete design for tunnel construction1**
Matthias Werner Beisler, ILF Consulting Engineers, Austria
- 11:30 - 12:00 **In situ testing of early age energy absorption in sprayed fiber reinforced concrete - HyEA – test25**
Michael Kompatscher, Hagerbach Test Gallery Ltd, Switzerland
- 12:00 - 12:30 **Limitation of strength of sprayed concrete34**
Sven Plückelmann, Ruhr University Bochum, Germany
- 12:30 - 14:30 Lunch
- 14:30 - 15:00 **Possible applications of a highly ductile sprayed concrete as a measure for ground support and structural upgrade35**
Götz Vollmann, Ruhr-University Bochum, Germany
- 15:00 - 15:30 **Toward a better understanding of the placement of shotcrete: Nozzles and velocities36**
Pierre Siccardi, Marc Jolin, Laval University, Canada

Monday, September 4, 2017 (continued)

- 15:30 - 15:45 **Cellular sprayed concrete for simple and economic remixing37**
Kyong-Ku Yun, Kangwon National University, Korea
- 15:45 - 16:15 Coffee Break
- 16:15 - 16:30 **Underground support for Xe-Pian Xe-Namnoy hydropower project, Lao
PDR - 12838**
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 rock39**
Kyong-Ku Yun, Kangwon National University, Korea
- 16:45-17:00 **Impact of polymer binders on the pull-out force of macro-synthetic fibers in
sprayed concrete40**
Klaus Bonin, Wacker Chemie, Germany
- 19:30 Dinner followed by social period

Tuesday, September 5, 2017

07:30 -09:00	Breakfast buffet
09:00 - 09:30	New development of an annular gap mortar for mechanized TunnellingN/A Matthias Hausmann, FH Münster, IuB, Germany
09:30 - 10:00	Structural retrofitting of rescue tunnels in single shell shotcrete construction – requirements and experiences49 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 2150 Andreas Schaab, HOCHTIEF Infrastructure GmbH, Germany
10:15 - 10:30	Concrete renovation and enhancing of fire protection of an existing tunnel with sprayable polymer cement concrete (SPCC)51 Stefan Peters, IMM, Germany
10:30 - 11:00	Coffee Break
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11:30 - 12:00	Properties and function of permanent shotcrete linings waterproofed with bonded membranes65 Karl Gunnar Holter, Norwegian University of Science and Technology NTNU, Trondheim, Norway
12:00 - 12:30	Impact of polymer binders on the pull-out force of macro-synthetic fibers in sprayed concrete66 Klaus Bonin, Wacker Chemie, Germany
12:30 - 14:00	Lunch Break
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14:30 - 15:15	Tunnel shotcrete lining for hydroelectric projects in British Columbia68 Lihe Zhang, Rusty Morgan, Canada
15:15 - 15:30	Application of cellular sprayed concrete into two-lift concrete69 Kyong-Ku Yun, Kangwon National University, Korea
15:30 - 16:00	Coffee Break

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09:30 - 10:00	Precipitations in the tunnel drainage system - Optimized shotcrete mix-designN/A Maria Thumann, OTH Regensburg, Germany
10:00 - 10:30	Innovative shotcrete technologies for durable rapid underground development and infrastructure repairs exposed to severe conditions79 Nicolas Ginouse, King Shotcrete Solutions, Canada
10:30 - 11:00	Final discussion
11:30	Lunch and departures