

In 1979 the renowned Grouting Fundamentals & Current Practice short course was founded in the USA, and since then has provided unique professional training and education to thousands of grouting professionals worldwide. In response to industry interest, the course organizers are pleased to now offer this exceptional training opportunity in Munich, Germany. The 1st European course edition includes a faculty of 18 experts from 10 countries, providing exceptional breadth and expertise concerning grouting fundamentals and international best practices.

This unique 4-day course covers pressure grouting as a method to improve geotechnical properties of soils and rock masses, with special focus on mechanisms, theories, and practical applications of grouting to ground densification and strengthening, permeability reduction and groundwater cutoffs. The curriculum has been developed specifically for Owners, Regulators, Consultants and Contractors having interest in the applications of pressure grouting to a broad array of geo-structural construction and remediation techniques.

Major course topics include:

- grout rheology
- cementitious and chemical grouting procedures
- overburden and rock drilling methods
- optimizing grouting during construction
- jet grouting
- deep soil mixing
- composite seepage barriers
- compaction grouting
- rock anchors and SBMA design
- micropiles
- compensation grouting
- permeation grouting
- GIN and RTGC in rock grouting
- amenability theory
- pre-excavation grouting for rock tunnels
- concrete repair

Monday (16.9.)

Material Properties and Applications

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| 8:00–8:10 | Welcome/Opening Remarks
Dean and Professor Dr. Thomas Apel – Bundeswehr University Munich (D)
Dr. Scott Kieffer – TU Graz (A) |
| 8:10–9:40 | Introduction and Overview
Clif Kettle – Clif Kettle Consulting (UK) |
| 9:50–10:50 | Grout Types and Rheology
Christophe Justino – Soletanche Bachy (F) |
| 11:00–12:00 | Cementitious Grout Materials & Mix Design
Christophe Justino – Soletanche Bachy (F)
Lunch Break |
| 13:00–14:00 | Chemical Grouting Basics and Applications in Underground Construction
Dr. Robert Penczek – DSI Underground (P) |
| 14:10–15:10 | Traditional Geotechnical Applications of Chemical Grouting
Götz Tintelnot – TPH Waterproofing Systems (D) |
| 15:20–16:10 | Chemical Grouting for Concrete Repair and Rehabilitation
Haktan Sahin – Sika AG (CH) |
| 16:20–17:00 | Penetrability of Silicate and Acrylate Gels: New Approaches & Design Concepts
Dr. Conrad Boley, Yashar Forouzandeh, Paul Pratter, Simone Wagner – Bundeswehr University Munich (D) |
| 18:00–21:00 | Icebreaker Reception |

Location

Bundeswehr University Munich
Room 2004
Werner-Heisenberg-Weg 39
85577 Neubiberg

Fee

Early Registration*	€ 1.990	(until 1. 8. 2019)
Regular	€ 2.390	
Partners	€ 1.690	
Student	€ 1.195	
One-Day Ticket	€ 800	

Registration

Register online:
www.grouting-fundamentals.com

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*For further information, visit the event website.

This professional training event is organized by the Institute of Applied Geosciences at the Graz University of Technology together with the publishing house Ernst & Sohn, and in cooperation with the Institute of Soil Mechanics and Foundation Engineering at the Bundeswehr University in Munich.



Grouting Fundamentals & Current Practice

40th Annual Short Course 1st European Edition

16.–19. September 2019 • Munich



www.grouting-fundamentals.com

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Tuesday (17.9.)

Rock Grouting

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| 8:30–9:20 | Tools for Optimizing Rock Mass Grouting
Dr. Scott Kieffer – TU Graz (A) |
| 9:30–10:50 | Cement Grouting in Rock – Overview and Applications
Trent Dreese – Gannett Fleming (USA) |
| 11:00–12:00 | The GIN Concept of Rock Grouting
Maren Katterbach – Lombardi Engineering (CH)
Lunch Break |
| 13:00–13:50 | Real Time Grouting Control (RTGC)
Mikael Creutz – Golder AB (S) |
| 14:00–14:50 | Dam Remediation: North American Case Histories
Trent Dreese – Gannett Fleming (USA) |
| 15:00–15:50 | Rock Anchors for Dams
Dr. Donald Bruce – Geosystems L.P. (USA) |
| 16:00–17:00 | High Capacity Anchors in Soils & Weak Rock (SBMA)
Dr. Devon Mothersille – SBMA/Geoserve Global (UK) |

Wednesday (18.9.)

Drilling, Specialty Construction Methods

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| 8:00–8:45 | Evolution of Small Hole Drilling Methods
Dr. Donald Bruce – Geosystems L.P. (USA) |
| 8:55–9:40 | Micropiles
Dr. Donald Bruce – Geosystems L.P. (USA) |
| 9:50–10:35 | Deep Soil Mixing
Dr. Clemens Kummerer – Keller Grundbau (D) |
| 10:45–11:30 | Composite Seepage Barriers
Dr. Donald Bruce – Geosystems L.P. (USA) |
| 11:40–12:25 | Mosul Dam: Remedial Measures and Outlook
Raffaella Granata – Trevi S.p.A. (I) |
| 12:30–17:00 | Hands-On Demonstration of Grout Materials and Equipment |

Thursday (19.9.)

Soil Grouting, Tunnels

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| 8:00–9:30 | Limited Mobility Grouting
Joe Harris – Hayward Baker (USA) |
| 9:40–11:00 | Permeation Grouting of Soils
Clif Kettle – Clif Kettle Consulting (UK) |
| 11:10–12:30 | Compensation Grouting
Clif Kettle – Clif Kettle Consulting (UK)
Lunch Break |
| 13:30–14:50 | Jet Grouting
Wolfgang Kühner – Keller Grundbau (D) |
| 15:00–16:00 | Pre-Excavation Grouting in Rock Tunnels
Hans-Olav Hognestad – Mapei UTT (N) |
| 16:10–17:00 | Post-Excavation Grouting in Underground Construction
Helmut Wannemacher – Implenia Austria (A) |

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