

SONDERFORSCHUNGSBEREICH 837

INTERAKTIONSMODELLE MASCHINELLER TUNNELBAU

RUB

SUMMER SCHOOL:

EXPERIMENT AND SIMULATION

18. - 20. SEPTEMBER 2017 Ruhr-Universität Bochum – IC 03 / 604
Universitätsstraße 150 – 44801 Bochum

Im Verbundforschungsvorhaben SFB 837 finden sowohl experimentell als auch numerisch orientierte Vorgehensweisen zur Erforschung der vielfältigen Wechselwirkungen im maschinellen Tunnelbau Anwendung. Labor- und in-situ Experimente liefern Erkenntnisse zur Beschreibung physikalischer Phänomene und werden zur Validierung numerisch-

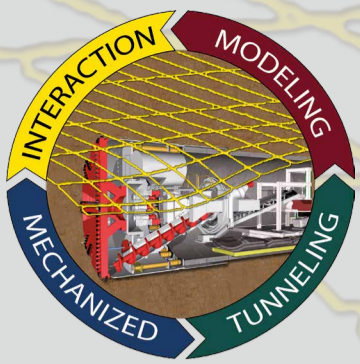
er Modelle und zur Identifikation der entsprechenden Modellparameter benötigt. Die Summer School „Experiment and Simulation“ fokussiert auf die gezielte Kombination experimenteller und numerischer Untersuchungen zur Erforschung des Material-, Struktur- und Systemverhaltens.

SUMMER SCHOOL PROGRAMM

18. SEPTEMBER 2017 – 09:00 - 21:30

- | | | | |
|-------|--|-------|---|
| 10:15 | Begrüßung | 15:30 | Kaffeepause |
| 10:30 | Computer tomography techniques applied to mesoscale modelling of concrete
Dr. Thorsten Leusmann
(Technical University Braunschweig) | 16:00 | Two-component grouts – Material-specific parameters for adaption to changing construction conditions
M. Sc. Christoph Schulte-Schrepping,
M. Sc. Malte Sauerwein
(Ruhr University Bochum) |
| 11:15 | From laboratory to big scale – Results of experimental and numerical investigations on tubbing support
Dipl.-Ing. Paul Gehwolf
(Montanuniversität Leoben) | 16:45 | A comparative study on the methods for global sensitivity analysis in application of mechanized tunneling
M. Sc. Elham Mahmoudi
(Ruhr University Bochum) |
| 12:00 | Gemeinsames Mittagessen | | |
| 13:30 | Practical Lab 1:
Tribological and mechanical properties of wear resistant materials
-
14:30 Dr. Arne Röttger
(Ruhr University Bochum) | 17:30 | Excursion: Moritz Fiege Brewery,
- Bochum |
| | Virtual lab
M. Sc. Andre Vonthron
(Ruhr University Bochum) | 21:30 | (17:30 departure from university,
18:30 beginning of excursion) |

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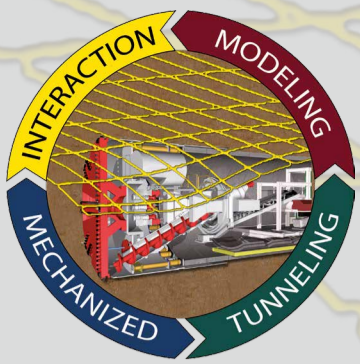
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19. SEPTEMBER 2017 – 09:00 - 19:00

- | | | | |
|-------|--|-------|---|
| 09:00 | Simulation of the interaction between ground and groundwater and its effects on the face movement-stability and consolidation settlement due to tail grouting in TBM tunneling
M. Sc. Dimitrios L. Litsas
(National Technical University of Athens) | 13:30 | Practical Lab 2: |
| | | - | Bentonite lab |
| | | 14:30 | Dr. Britta Schöber
(Ruhr University Bochum) |
| | | | Grouting test-setup in large scale considering in situ conditions
M. Sc. Christoph Schulte-Schrepping
(Ruhr University Bochum) |
| 09:45 | Experimental and numerical investigations for the conception of hybrid tunneling systems
M. Sc. Sven Plückelmann,
M. Sc. Mario Smarslik,
M. Sc. Vojtrec Gall
(Ruhr University Bochum) | 15:30 | Kaffeepause |
| | | 16:00 | Geological exploration in tunneling by means of experimental and numerical investigations
M. Sc. Maximilian Trapp,
M. Sc. Andre Lamert
(Ruhr University Bochum) |
| 10:45 | Kaffeepause | 16:45 | Slurry support tunnel face – Implementation of the results from experimental studies into simulations of face stability
Ing. Zdenek Zizka
(Ruhr University Bochum) |
| 11:15 | Parametric information modelling of mechanised tunnelling projects for multi-level decision support
Prof. Christian Koch
(Bauhaus University Weimar) | 18:00 | Gemeinsames Abendessen (Q-West) |
| 12:00 | Gemeinsames Mittagessen | | |



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20. SEPTEMBER 2017 – 09:00 - 18:00

Academic Writing & Presentation Workshop (Sarah Braun, M.A., M.Ed.)

There are two sides to working in academia: the scientist's research as well as publishing results in order to further scientific discourse. This workshop focuses on the latter aspect in providing useful insights and techniques for the mastery of academic writing and presenting. More specifically, the aim of this workshop is to reveal what constitutes a great research paper and how to present know-how successfully. Group work activities throughout the workshop ensure a hands-on approach to the art of academic research, writing and presentation.

Workshop objectives:

- to understand desirable practices in research
- to introduce participants to planning, writing, and presentation strategies
- to encourage participants to critically reflect on their writing and presentation habits
- to undo some research planning, writing and presentation myths
- to strengthen the participants' confidence in academic writing and presenting

09:00 **I. PLANNING YOUR PROJECT:
From a broad idea to the concrete
research question**

1. Identification of a topic
2. Framing an argumentative thesis
3. Structuring technique
4. Sourcing of information & literature review

11:30 **Gemeinsames Mittagessen**

12:30 **II. WRITING UP YOUR PROJECT:
From the rough draft to the finished text**

1. Making claims & how to support them
2. Academic language & writing style
3. Revision and proof-reading
4. Formatting, citations & referencing

15:00 **Kaffeepause**

15:30 **III. SCIENTIFIC PRESENTATION:
How to convey your know-how using
body language and visual aids**

1. Organization of the presentation
2. Focus of the presentation
3. Using visual aids
4. Delivery of the presentation

18:00 **Zusammenfassung und Abschluss**