

Characterisation of Materials with inherent Micro structure: towards modelling of hydro-mechanical behaviour

Ruhr-Universität Bochum

International Workshop 2011
3. March 2011

Conference Venue: Zeche Zollern, Dortmund
Nebengebäude

	Opening	09:50
<i>Holger Steeb, Ruhr-Universität Bochum, Germany</i>		
	Soil phenomena at the particle/pore scale	10:00
<i>Carlos Santamarina, Georgia Tech Atlanta, USA</i>		
	Quantification of Soil Structure and Heterogeneity including temporal dynamics (hans-joerg.vogel@ufz.de)	10:30
<i>Hans-Jörg Vogel, Martin-Luther Universität Halle & UFZ Leipzig, Germany</i>		
	Lattice Boltzmann Methoden, Permeabilitäten, Porositäten, Rekonstruktion	11:00
<i>Jens Harting, TU Eindhoven, The Netherlands</i>		
	Dynamics of PSD under HM-loading conditions	11:30
<i>Lyesse Laloui, ETH Lausanne, Switzerland</i>		
	Modelling and Parameter Identification of (un-)saturated Fluid Flow and Reactive Transport Problems	12:00
<i>Peter Knabner & Michael Blume, Friedrich-Alexander Universität Erlangen-Nürnberg, Germany</i>		
	Three dimensional transient thermohydro-mechanical fundamental solutions of unsaturated soils	13:00
<i>Behrouz Gatmiri & Pooneh Maghoul, ENPC Paris, France</i>		
	Dynamic permeability experiments	14:00
<i>Jörg Renner & Yasir Al Badran, Ruhr-Universität Bochum, Germany</i>		
	Accoustic emissions, backward-in-time modelling	14:30
<i>Birgit Meng, BAM Berlin, Germany</i>		
	Local flow experiments, Peterson device	15:00
<i>J. P. Burg & Beatriz Quintal, ETH Zürich, Switzerland</i>		
	Closing	16:00
<i>Tom Schanz, Ruhr-Universität Bochum, Germany</i>		
	Reception	16:30



Starting from spring 2009 the Chairs of *Continuum Mechanics* and *Foundation Engineering, Soil and Rock Mechanics* at Ruhr-Universität Bochum (Germany) redefined their research strategy. The focus of their interdisciplinary and international based research is on the integrated theoretical, numerical and experimental analysis of multi-phase and multi-scale continua with application to:

- Novel materials (Nano composites, foams, polymer enhanced clays - nano & micro scale)
- Multi-physics (CE- and mechanical constructions - technical scale)

Environmental challenges (Natural hazard, reservoir engineering, HLW repositories - geophysical scale)

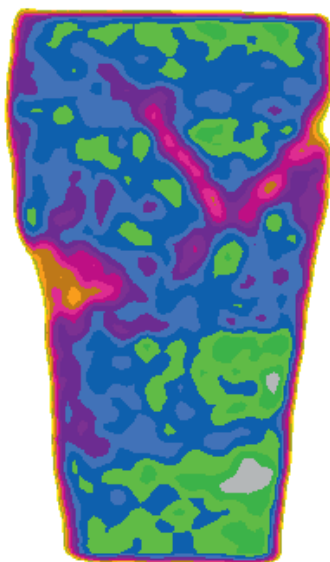
The two groups benefit from their long term and complementary competence in an excellent manner:

- Theoretical and numerical modeling experience of multi-phase materials with internal length scales
- Unique experimental facilities for the characterization of multi-phase materials including dynamic phenomena
- Bochum Large Geotechnical Centrifuge Center

By the above mentioned jointed strategy, we go first steps in the direction to establish a center of competence in the field of "*Multi-scale and multi-phase analysis in Geosciences*" at Ruhr-Universität Bochum.

In this sense the 2nd workshop 2011 bringing together international experts could be regarded as a further step in a series of hopefully coming many more in the future.

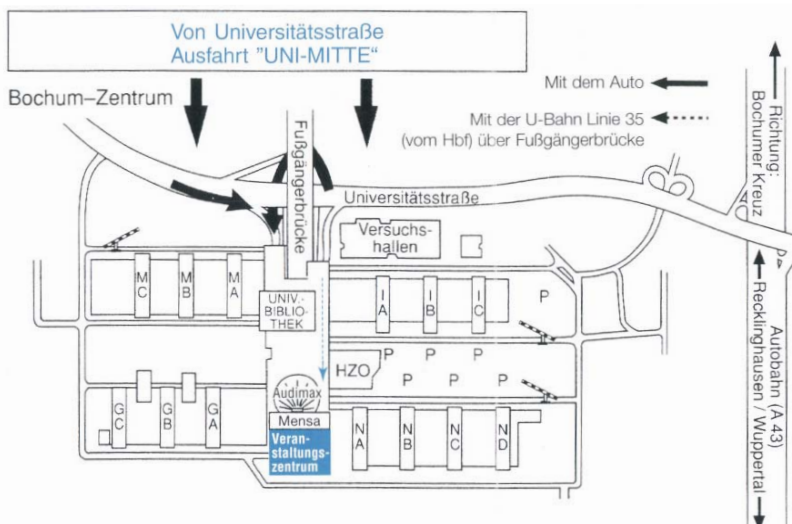
Bochum, December 2010
Holger Steeb & Tom Schanz



Organisation & Registration

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Site map Ruhr-Universität Bochum



Route by Car ➔

Motorway A 43, interchange "Bochum - Witten", exit at "Bochum-Querenburg/Universität" (exit no. 19). Universitätsstrasse direction Universität/Zentrum, exit at "Uni-Mitte" (about 2 km). Free parking is sign posted.



Route by Train U 35

From Bochum Hauptbahnhof (Central Station) take the U35 towards Bochum Querenburg (Hustadt) and get out at stop "Ruhr-Universität". (Ticket needed: Preisstufe A).