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RD SME BOARD MEMBERS**PROF. DR. GÜNTHER MESCHKE****SPEAKER**

RUB/ Civil and Environmental Engineering/ Structural
Mechanics

PROF. DR. WOLFGANG FRIEDERICH**DEPUTY SPEAKER**

RUB/ Geosciences/ Geology, Mineralogy and Geophysics

PROF. DR. JÖRG RENNER

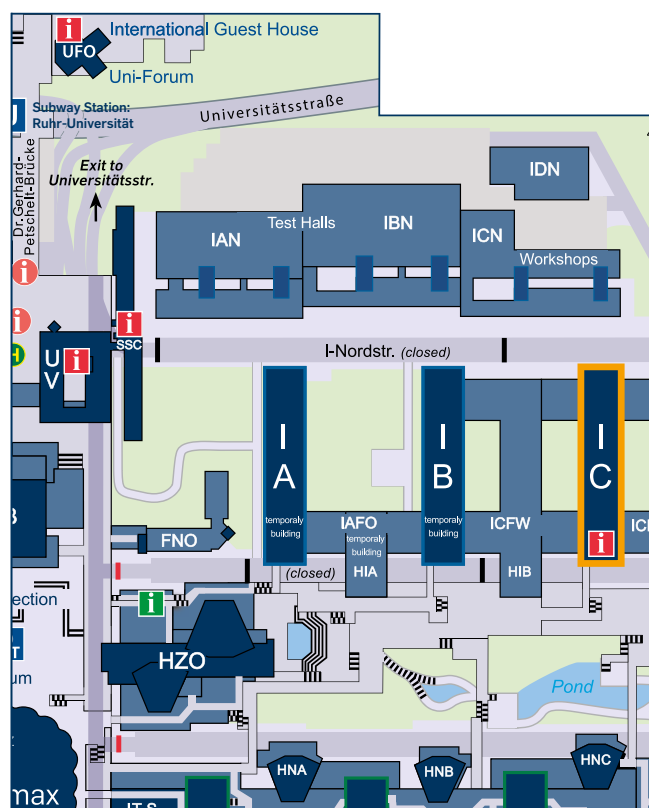
RUB/ Geosciences/ Geology, Mineralogy and Geophysics

PROF. DR. ERIK H. SAENGER

RUB/ Bochum University of Applied Sciences/
Reservoir Engineering & Petrophysics

PROF. DR.-ING. MARKUS THEWES

RUB/ Civil and Environmental Engineering/
Tunneling & Construction Management

CAMPUS MAP

Full Map and further travelling information:

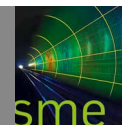
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Research Department
Subsurface Modeling and Engineering

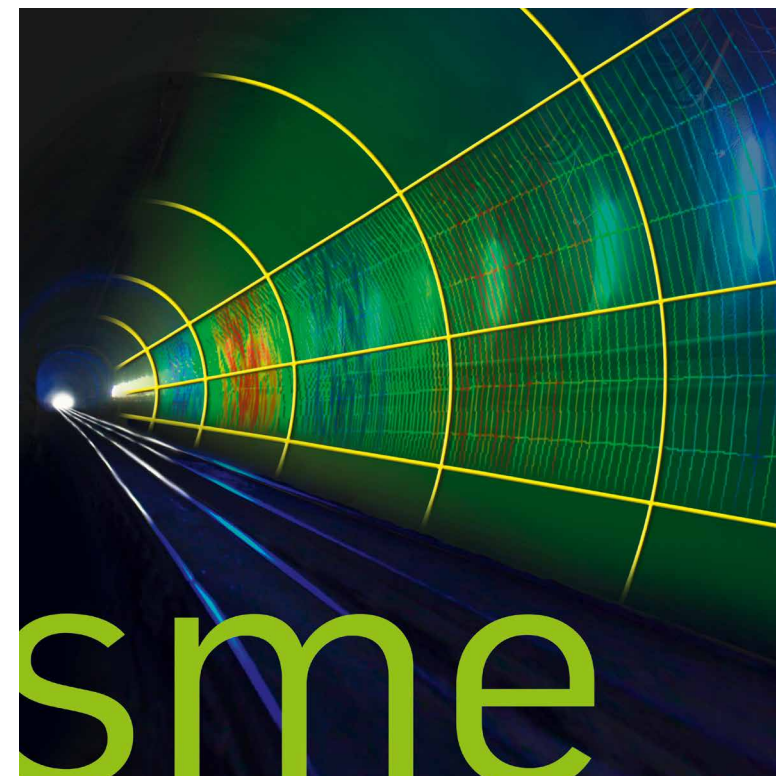
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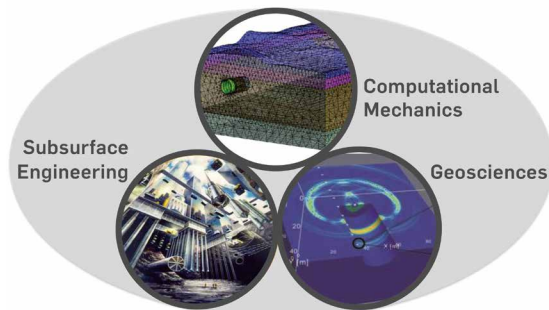
OCTOBER 25TH, 2017
**BOCHUM UNDERGROUND
SPACE DAY 2017 –
SUBSURFACE & ENERGY**
IC 03 / 606, RUHR UNIVERSITY BOCHUM



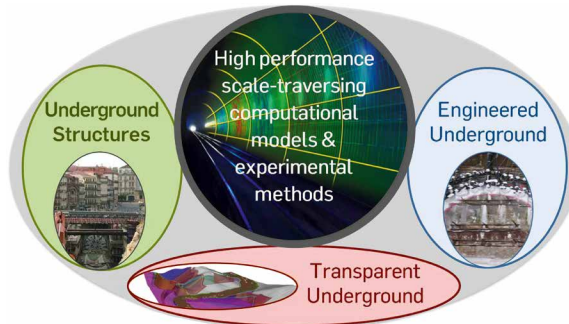
RD SME RESEARCH DEPARTMENT: SUBSURFACE MODELING AND ENGINEERING

The Research Department (RD) „Subsurface Modeling and Engineering” (SME) provides an interdisciplinary platform of top level research in computational modeling and simulation of engineered subsurface systems (tunneling, geothermal energy, energy storage, waste deposits) to enable optimized, more efficient and safe solutions for the future use of underground space.

The RD SME is aiming to exploit synergies from the co-operation of highly qualified PI's and Junior PI's across disciplines belonging to the universities of the University Alliance Ruhr (UAR), the Bochum University of Applied Science and Extra-University Research Organizations. The RD also actively promotes international cooperation in the area of subsurface modeling and engineering.



The RD brings together three areas of long term research competence at Ruhr University Bochum: Computational Engineering, Subsurface Engineering and Geosciences.



RD SME WORKSHOP BOCHUM UNDERGROUND SPACE DAY 2017 – SUBSURFACE & ENERGY

The “Bochum Underground Space Day” is organized by the Research Department Subsurface Modeling and Engineering (RD SME) at Ruhr University Bochum as an annual workshop to exchange results of pertinent research and to foster co-operation within the RD as well as with external research institutions and companies.

This year the workshop will be devoted to the general topic “Subsurface and Energy”. It starts with two invited keynote lectures (Prof. Lyesse Laloui, EPFL Lausanne and Prof. Tom Schanz, Ruhr University Bochum), followed by presentations from members of the RD and external institutions. During lunch break there will be a poster session open for all members of the RD to share their recent research.

After the workshop, a General Assembly of the RD SME will be held.

WORKSHOP PROGRAM OCTOBER 25TH 2017, 10:00 - 15:00, BUILDING IC, FOOR 03, ROOM 606

10:00 **Welcome**

10:05 **GEOMECHANICAL SOLUTIONS FOR GEO-ENERGY ISSUES**

Prof. Lyesse Laloui

Swiss Federal Institute of Technology, École Polytechnique Fédérale de Lausanne, Switzerland

10:40 **USE OF SALT CAVERNS FOR THE TEMPORARY STORAGE OF RENEWABLE ENERGY**

Prof. Tom Schanz

Chair of Foundation Engineering Soil and Rock Mechanics, Ruhr University Bochum

11:15 **MODELLING CONCEPT OF SEASONAL HEAT STORAGE IN FLOODED COAL MINES: CALCULATION AND VISUALIZATION OF COUPLED DENSITY AND VISCOSITY DEPENDENT FLOW**

Dr. Christoph König

delta h Ingenieurgesellschaft mbH

WORKSHOP PROGRAM OCTOBER 25TH 2017, 10:00 - 15:00, BUILDING IC, FOOR 03, ROOM 606

11:35 **MODERN CHALLENGES OF UNDERGROUND ENERGY STORAGES**

Dr. Tobias Rudolph

Uniper Energy Storage GmbH

11:55 **Buffet with Poster Presentations**

13:10 **DER TUNNEL ALS WÄRMELIEFERANT / THE TUNNEL AS HEAT SUPPLIER**

Dipl.-Ing. Wolf Friedemann

Züblin - Tunnelbau Stuttgart (TUB-S)

13:30 **PROCESS UNDERSTANDING OF REACTIVE MULTIPHASE FLOW SYSTEMS IN SALT DEPOSITS (PROSALZ)**

Dr. Rüdiger Giese

Helmholtz Centre Potsdam - GFZ German Research Centre for Geosciences

13:50 **RESEARCH AT GEOTHERMAL SITE HORSTBERG WITH FOCUS ON GEOMECHANICS**

Dr. Alireza Hassanzadegan

Federal Institute for Geosciences and Natural Resources

14:10 **COOPERATIVE RESEARCH IN SHYNERGIE AND AGES**

Prof. Jörg Renner

Experimental Geophysics, Ruhr University Bochum

14:40 **Break**

15:00 **GENERAL ASSEMBLY OF THE RD SME**

Discussion on future research cooperations