International Research Training Group
NUPUS

The International Research Training Group “Non-linearities and Upscaling in Porous Media” (NUPUS) is a Dutch-German-Norwegian graduate school, in which researchers from TU Delft, TU Eindhoven, Wageningen University, Utrecht University, University of Bergen and University of Stuttgart participate. NUPUS is funded by the German Research Foundation (DFG), the Netherlands Organisation for Scientific Research (NWO) and the Research Council of Norway.

The participating scientists excel in such diverse fields as applied mathematics, scientific computing, physics, environmental and civil engineering, geosciences, and petroleum engineering.

Additionally, the following international partners are associated with NUPUS:

- Peter Bastian and Olaf Ippisch, Heidelberg University
- Wolfgang G. Bessler, German Aerospace Centre
- Michael A. Celia, Princeton University
- Al Cunningham, Montana State University
- Sebastian Geiger, Heriot Watt University
- William Gray and Cass Miller, University of North Carolina at Chapel Hill
- Tissa H. Illangasekare, Colorado School of Mines
- Knut-Andreas Lie, SINTEF, Norway
- Insa Neuweiler, Leibniz University Hannover
- Dani Or, Swiss Federal Institute of Technology Zurich
- Adam Szymkiewicz, Gdansk University of Technology

Conference Venue

The conference will be held in Os (45-minute drive from Bergen) at the Solstrand Hotel & Bad:

Solstrand Hotel & Bad
Solstrandveien 200,
Postboks 54, 5201 Os
Norway
http://www.solstrand.com/

Sponsors

Deutsche Forschungsgemeinschaft

Netherlands Organisation for Scientific Research

The Research Council of Norway

in collaboration with

INTERPORE

International Society for Porous Media

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Simulation of underground CO₂ sequestration
The most important goals are to:

• observe non-linear flow and transport phenomena within heterogeneous media,
• provide mathematical descriptions on various scales,
• develop efficient numerical schemes for the governing equations, and
• identify and formulate correct assumptions for the various scales.

Abstract submission

The deadline for the submission of abstracts has been extended to 31st March 2013. In order to submit an abstract, please go to www.nupus.uni-stuttgart.de

Conference fee and registration deadlines

The conference fee includes accommodation with full board, hot and cold drinks, and snacks.

InterPore members will receive a 10% reduction on the registration fee.

Early registration until 15th June 2013:

• 2600 NOK (accommodation in single room)
• 1500 NOK (accommodation in double room – this option is only for PhD and M.Sc. students)

Late registration until 15th August 2013: 3000 NOK

Programme

The conference agenda will include the following sessions:

• Fundamental methods and concepts
• Numerical methods
• Modelling strategies for selected applications
• Benchmarks

There will be oral presentations as well as intensive poster sessions.

Invited speakers:

• Louis Durlofsky, Stanford University
• Paal Frisvold, Bellona, Norway
• Manfred Krajczyk, TU Braunschweig
• Insa Neuweiler, Leibniz University Hannover
• Michel Quintard, Institut de Mécanique des Fluides de Toulouse
• Philip Ringrose, Statoil, Norway
• Dorthe Wildenschild, Oregon State University

Organising Committee

University of Bergen:
Ivar Aavatsmark, Inga Berre, Helge Dahle, Sarah Gasda, Jan Nordbotten and Florin Radu

University of Stuttgart:
Holger Class, Wolfgang Ehlers, Bernd Flemisch, Rainer Helmig, Rudolf Hilfer, Christian Rohde, Wolfgang Nowak and Karen Schmid

Utrecht University:
Vahid Joekar-Niasar, Ruud Schotting and Paul Zegeling

TU Delft:
Timo Heimovaara and Daniel van Odyck

Wageningen University:
Sjoerd van der Zee

International Scientific Committee

• Philip Binning, Technical University of Denmark
• Hans Bruining, TU Delft
• Mike Celia, Princeton University
• Al Cunningham, Montana State University
• Hans van Duijn, TU Eindhoven
• Sebastian Geiger, Heriot-Watt University
• Margot Gerritsen, Stanford University
• Joachim Gross, University of Stuttgart
• Majid Hassanizadeh, Utrecht University
• Rudolf Held, Statoil, Norway
• Knut-Andreas Lie, SINTEF, Norway
• Ulrich Nieken, University of Stuttgart
• Dani Or, Swiss Federal Institute of Technology Zurich
• Sorin Pop, TU Eindhoven
• Adam Szymkiewicz, Gdansk University of Technology
• Hamdi Tchelepi, Stanford University
• Mary Wheeler, The University of Texas at Austin

NUPUS goals

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Fuel cells

Robust numerical methods

CO₂ storage

Non-equilibrium concepts, upscaling and hysteresis, non Gaussian structure

Multi-scale and multi-physics

Enhanced oil recovery

A

Fundamental methods and concepts

B

Numerical methods

C

Modelling strategies for selected applications