



INTERPORE NEWS

Issue 1, July 2009







First International Conference: CHALLENGES OF POROUS MEDIA



Institut
Techno- und
Wirtschaftsmathematik

In March 2009, InterPore successfully conducted its [1st international conference](#) at the Fraunhofer Institute for Industrial Mathematics (ITWM) in Kaiserslautern, Germany, including more than 120 participants from a wide range of academic institutes and industry.

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The atrium of the Fraunhofer Institut, used for posters



3D display equipment, by Planar, on display near the coffee area

SECOND INTERNATIONAL CONFERENCE

March 14-17 2010, Donald L. Houston Center, Texas A&M University

<http://isc.tamu.edu/news-and-events/2010-interpore-conference-and-annual-meeting.html>

Contact: Yalchin Efendiev [yalchinrefendiev@gmail.com]

Speakers to include: Prof T.J.R Hughes (UT Austin) and Prof K.R. Rajagopal (Texas A&M)

Don't miss it !

Some words from the President

Dear InterPore members,

Welcome to the very first issue of InterPore News, a new communication platform for all those involved in porous media research and applications, ranging from academia to industry, from “old hands” to young researchers.

The goal of the International Society for Porous Media is to advance and disseminate knowledge for the understanding, description, and modeling of natural and industrial porous-media systems.



But what does this mean in practical terms? It means creating an open and active society that offers help and support to all researchers, both students and established scientists, to bridge the gap between theory and practice, for example natural, bio- and industrial / technical applications. My idea of the society is that it should be a platform for sharing knowledge and experience in the fields of education, research and practical applications. I am sure that these fields can learn a great deal from one another and can create a general theory of flow and transport processes in porous media.

Help us achieve this goal by actively supporting InterPore! The society is only as good as we make it by, for example, setting up networks, encouraging others to join, taking an active part in InterPore activities and contributing to InterPore News. It's up to us all!

Rainer

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InterPore News

www.interpore.org

Published in printable electronic form by the International Society for Porous Media (InterPore).

Circulated free of charge to members of InterPore.

Articles and news items on the study and characterisation of porous media, especially when relevant to other types of porous media, are welcomed for publication in this newsletter, issued three times a year.

Copy deadline for next issue: October 17th 2009

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pmatthews@plymouth.ac.uk

Margot Gerritsen (Committee contributions and website)

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The **International Society for Porous Media (InterPore)** is a non-profit-making independent scientific organization established in 2008.

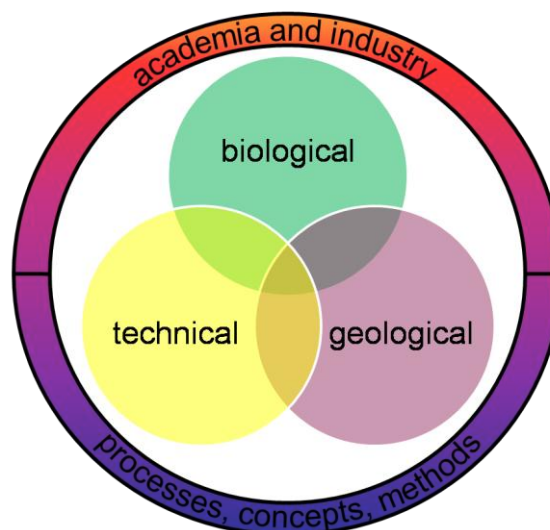
The general aim of the Society is to advance and disseminate knowledge for the understanding, description, and modeling of natural and industrial porous media systems.

Key Aims of the Society

- facilitate connections and collaboration among industrial and academic researchers;
- connect porous media theoreticians, modellers, and experimentalists;
- provide a forum for exchanging ideas and expertise for the improvement of porous media models;
- identify research questions that will lead to major improvements in the theories and models of complex porous media and to define modelling challenges;
- facilitate training and education.

Examples of Industrial & Natural Applications of Porous Media

Fuel cells, paper-pulp drying, food production and safety, filtration, concrete, ceramics, moisture absorbents, textiles, paint drying, polymer composites, and detergent tablets. The most well-known natural porous media involving multiphase flow and transport are soils, aquifers, and reservoirs. But such processes also occur in biological tissues and plants. Recently, there has been growing interest in the biomechanics of porous tissues, engineered tissues, and in-tissue drug delivery.



Why should you join InterPore?

InterPore is uniquely positioned to connect experts and practitioners from a diverse field of both scientific and engineering know how as well as industrial applications. This enables faster and unexpected connections resulting in quicker learning and accelerated innovation.

You can become a member by registering online or contacting InterPore.

INTERPORE: "Similar solutions to diverse applications."

Website: www.interpore.org

Contact: info@interpore.org



EVENTS OF INTEREST

Summer School, Role of Interfacial Area in Two Phase flow and Transport in Porous Media	University of Utrecht	19-24 July 2009	See page 6
PhD Summer School, Petroleum Reservoir Fluids	Technical University of Denmark, Lyngby	10 -28 August 2009	See page 5
International Conference on Non-linearities and Upscaling in Porous Media	Stuttgart, Germany	5 – 7 October 2009	See page 5
8th North American Workshop on Applications of the Physics of Porous Media	Ensenada, Mexico	9-12 October, 2009	See page 6
9th Workshop on Porous Media	Orsay, France	21-22 October 2009	See page 7
The XVIII Conference on Computational Methods in Water Resources (CMWR 2010)	Technical University of Cataluña, Barcelona, Spain	21 to 24 June 2010	See page 8
Third International Conference on Porous Media and its Applications in Science, Engineering and Industry	Tuscany, Italy	20-24 June, 2010	See page 9
Gordon Conference on Flow & Transport in Permeable Media	Bates College Lewiston, ME, USA	11-16 July, 2010	See page 8

IVC-SEP
Center for Phase Equilibria and Separation Processes
Department of Chemical and Biochemical Engineering

Technical University
of Denmark



Ph.D. Summer School

Petroleum Reservoir Fluids.

Properties and Production

August 10 to 28, 2009



Center for Phase Equilibria and Separation Processes

The Technical University of Denmark

Department of Chemical and Biochemical Engineering

Building 229, DK-2800 Lyngby

Denmark

International Conference on Non-linearities and Upscaling in Porous Media

Stuttgart, Germany, 5th - 7th October 2009

Invited Speakers: Robert Eymard (Université de Marne-la-Vallée), Hamdi Tchelepi (Stanford University), Jürgen Fuhrmann (Weierstrass Institute for Applied Analysis and Stochastics), Michael A. Celia (Princeton University)

URL: <http://www.nupus.uni-stuttgart.de>

Conference objective

Coping with non-linearities and the question of upscaling are outstanding challenges in environmental, technical, and biological applications in the field of flow and transport in porous media. A variety of characteristic (spatial and temporal) scales can be identified in porous media which are generally related to the structure of their heterogeneities. The flow and transport phenomena in these media can be caused by coupled mechanisms resulting from the non-linear interplay between physical, chemical, and/or biological processes. In all of these research fields, models must be formulated for coupled, non-linear multiphase flow and transport processes. The goal of this conference is to provide a forum for the exchange of experience and discussion of new model concepts.

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**8th North American Workshop on
Applications of the Physics of Porous Media, 2009**

Ensenada, Mexico, Oct. 9-12, 2009

This workshop is the 8th biennial meeting on the physics of porous media and its applications to a broad range of basic problems encountered in geophysics, geomechanics, medical physics and condensed matter physics.

The topics include multiphase flow and transport, wave phenomenon, constitutive modeling, granular behavior, and field and laboratory measurements.

On this occasion the special themes are artificial recharge and reversal of soil compaction, non-linear deformation processes, random porous media, and seawater intrusion in coastal aquifers.

Prospective authors are invited to submit the application form.

For further details, please visit the workshop web page: <http://poro2009.cicese.mx>.

Important dates: Application deadline: April 30, 2009

Early application is encouraged as limited number of people can be accepted.

Abstract / short paper deadline: July 31, 2009

Registration and housing reservation: Opens August 1, 2009

**Summer School
on
Role of Interfacial Area in Two-Phase Flow and Transport
in Porous Media:
Theory, Experiment, Modelling
19 - 24 July, 2009
Utrecht**

organized by

**Environmental Hydrogeology Group,
Utrecht University**

**Hydromechanics and Modeling of Hydrosystems,
Stuttgart University**

The summerschool is co-organized by Interpore



Universiteit Utrecht



Universität Stuttgart
Germany



INTERPORE

International Research
Training Group



Boussinesq Center
for Hydrology

For further information, go to <http://www.uni-stuttgart.de/ia-workshop/scope.htm>



Welcome
Venue
Important dates
Program
Registration
Organizing Committee
Reviewer Committee
Abstract Submission

Welcome

The 9th Workshop on porous medium will held in October 21-22th 2009 at Orsay University.

This colloquium aims to gather the research community in the porous media area. To overview the recent progress in this research area, this colloquium consists in fifty lectures (20 mn each), four poster sessions and four invited lectures. The participation of young researchers is particularly encouraged. This year, the following themes will be promoted:

- Structural characterization
- Environmental issues (CO2 sequestration, pollutant transport...)
- Civil Engineering
- Nanoporous medium
- Biological porous medium
- mechanical behaviour



Note that there is 20 Euro discount for InterPore members !

<http://www.fast.u-psud.fr/~jemp2009/>

The XVIII Conference on Computational Methods in Water Resources
(CMWR 2010) , June 21 to 24, 2010

at the Technical University of Cataluña, Barcelona, Spain

<http://congress.cimne.com/CMWR2010/frontal/default.asp>



XVIII International Conference on
Computational Methods in Water Resources
June 21-24, 2010, Barcelona, Spain

Introduction
Organizers
Committees
Special Sessions
Submission of Contributions
Registration
Instructions for Authors
Important Dates
Secretariat
Location
Accommodation

Number of visits: 584

Gordon Conference on Flow & Transport In Permeable Media,

July 11-16, 2010

Bates College Lewiston, ME

<http://www.grc.org/programs.aspx?year=2010&program=flow>



GRC Gordon Research Conferences
frontiers of science

Conference Program

Flow & Transport In Permeable Media

July 11-16, 2010
Bates College
Lewiston, ME

Chair:
Pal-Eric Oren

Vice Chair:
Tissa H. Illangasekare

MEETING LINKS
• Online Application
• Conference History
• Chair Contact Info
• Registration Information

SITE & TRAVEL LINKS

MEETING FEES

FOR ATTENDEES
ABOUT GRC
THE ORGANIZATION
FOR CHAIRS
MISCELLANEOUS

Application Deadline
Applications for this meeting must be submitted by **June 20, 2010**. Please apply early, as some meetings become oversubscribed (full) before this deadline. If the meeting is oversubscribed, it will be stated here. Applications will still be accepted for oversubscribed meetings. However, they will only be considered by the Conference Chair if more seats become available due to cancellations.

Related Meeting Information
The Flow & Transport In Permeable Media Gordon Research Conference will be held in conjunction with the **Flow & Transport In Permeable Media Gordon-Kenan Research Seminar**. Those interested in attending both meetings must submit an application for the GKRS in addition to an

General Announcement and Call for Abstracts
Oral Abstract Deadline: December 1, 2009
Poster Abstract Deadline: March 1, 2010

**Third International Conference on Porous Media
and its Applications in Science, Engineering and Industry**

June 20-24, 2010
Tuscany, Italy



<http://www.engconfintl.org/10ap.html>

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RELATED ORGANISATIONS

UNISCI (University-Industry Student Exchange Center - InterPore)

InterPore is very happy to introduce the new UNISCI (University-Industry Student Exchange Center - InterPore)

UNISCI helps graduate students from InterPore's universities and academic partners with InterPore's industrial partners. UNISCI aims at promoting training, education and industrial experience for students, collaboration between academia and university and contributing to the scientific discussion on porous media systems. Industries and universities will soon be able to advertise open vacancies for graduate students on the InterPore website. Students will be able to apply to vacancies through the website also.

We expect the UNISCI website to be up and running by the end of this summer.

For more information you can contact the UNISCI Coordination Group:

Rodrigo Rosati (Procter & Gamble) (rosati.ro@pg.com)

Azita Amhadi-Senichault (University of Bordeaux)

Rudolf Hilfer (University of Stuttgart)

SIAM activity group on Geosciences

The Activity Group on Geosciences of the Society of Industrial and Applied Mathematics (SIAM) provides an interactive environment wherein modelers concerned with problems of the geosciences can share their problems with algorithm developers, applied mathematicians, numerical analysts, and other scientists. Topics of interest include flow in porous media, multiphase flows, phase separation, wave propagation, combustion, channel flows, global and regional climate modeling, reactive flows, sedimentation and diagenesis, and rock fracturing. If you are a SIAM member interested in any of these application areas, please join us. SIAG GS is growing. We currently have over 320 members, up from 250 in 2005.

The highlight of our activities is our biennial conference. The last conference was very recently held in Leipzig and was a very well attended conference with many stimulating presentations and discussions.

The next SIAG GS conference will be held in March 2011 in the US.

For more information about the SIAG GS or its conference, please contact the SIAG GS chair Margot Gerritsen at

margot.gerritsen@stanford.edu

wiki.siam.org/wiki/siag-gs

The Filtration Society

<http://www.lboro.ac.uk/departments/cg/research/filtration>



RESEARCH ACTIVITY

Research at Stuttgart

Our group works on generalizations of the classical theory for multiphase flow through porous media by including equations of motion for residual saturations. The generalized theory contains the traditional theory as a special case, but describes hysteresis as well as simultaneous drainage and imbibition processes. A second focus of our work are multiscale models for carbonate rocks containing several decades of pore sizes and pore structure detail.

For more detail contact: R. Hilfer, ICP, Univ. Stuttgart, 70569 Stuttgart, Germany)

<http://www.ica1.uni-stuttgart.de/~hilfer/publikationen/index.en.php>

Research at Plymouth, UK

The Environmental and Fluid Modelling Group at the University of Plymouth, UK, is interested in the behaviour of pore fluids in a wide range of systems, including filters, paper coatings and soil. A current interest is dual porous systems in which the two levels of porosity (macro- and micro-) are explicitly coupled rather than simply acting hierarchically or independently. An example of a situation where this is required is in the modelling of soil to explain the production of nitrous oxide, the 4th most important greenhouse gas, monitored under the Kyoto agreement. The bacteria that produce the nitrous oxide reside in microporous 'hot-spots', whereas the transport of water and gases occurs predominantly through the macro-porosity. The explicit coupling allows the understanding and hence prediction of the precise conditions under which nitrous oxide will be produced. The work is part of the £1.1m U.K. Biotechnology and Biological Sciences Research Council (BBSRC) programme for Understanding Soil Quality and Resilience [grant numbers BBE001793 and BB/E001580], in collaboration with Rothamsted Research and North Wyke Research. The work will be presented in the plenary session of **Biohydrology 2**, Bratislava, September 21-24, 2009. For more detail visit our website www.pore-cor.com and/or contact pmatthews@plymouth.ac.uk.

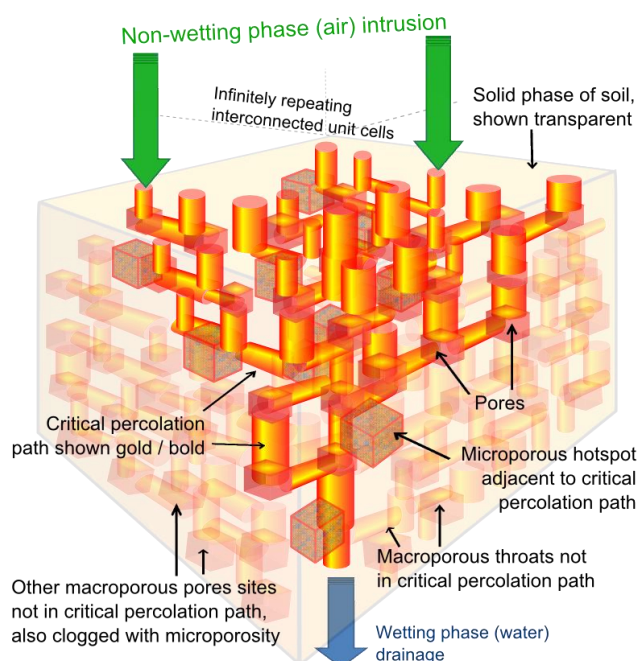
Research at Utrecht, Netherlands

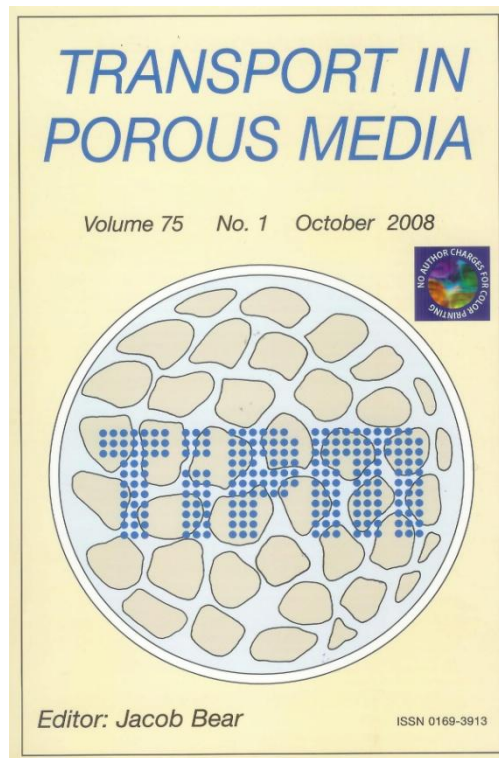
The Environmental Hydrogeology Group at the Department of Earth Sciences, Utrecht University carries theoretical, computational, and experimental research on fundamental theories of multiphase flow and transport in porous media. In particular, advanced theories of two-phase flow including fluid-fluid interfacial areas are studied using pore-network models, micromodel experiments, and column experiments. Also, upscaling of reactive transport, colloid transport, and density-dependent flow in porous media. Applications include research on fuel cells and infusion of therapeutic drugs into brain tissues.

For more detail visit our website

<http://www.geo.uu.nl/hydrogeology/>

and/or contact Hassanizadeh@geo.uu.nl





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<http://www.springer.com/earth+sciences/journal/11242>

For more information and on possible new special issue proposals for the journal
Transport in Porous Media, please contact:

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For more information and on possible new book publications proposals, please contact:

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