



INTERPORE NEWS

Issue 4, November 2010

An eventful year 2011 coming up

The InterPore society has an exciting 2011 planned. This newsletter is packed with future events and news. These include elections of the society's president and four new council members, the "3rd international conference on porous media", our annual society meeting in Bordeaux, France, a list of awards offered to researchers and students through our community and, finally, our new website is launch and available to all members.

You will find information on all of these events within the first pages of the current issue of InterPore News.

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Third International Conference on Porous Media & Annual Meeting

Our third annual conference and society meeting will take place on March 29th -31th, 2011, at the Université Bordeaux in France. Detailed information is available on pages 7 and 8 of this newsletter. You can download the conference flyer, register, see the scientific programme and local hotels etc at

<http://interpore2011.u-bordeaux.fr/>



Important upcoming dates include notification of abstract acceptance **on November 30th, 2010**, and the early discounted registration open until **January 17th, 2011**.

The objective of the conference is to bring together porous media theoreticians, modellers, and experimentalists from academia and industry, and to provide a forum for exchanging ideas and expertise for advancement of porous media science.



COMMUNITY NEWS

Fourth International Conference on Porous Media

The “**Fourth InterPore Annual Meeting and Conference**” will be held on **May 14th - 16th, 2012**, at Purdue University, West Lafayette, Indiana, US. Information will be available soon. The conference chair is: Professor John H Cushman (www.math.purdue.edu/~jcushman/jcushman.html).

News from the InterPore Website








We are very pleased to announce that the new InterPore website has been launched!!! Thanks to all members who provided guidance and feedback in this endeavour. Please visit the revamped website for all the information you need (or links to information) on fluid flow in permeable media in addition to information about the society (e.g., prizes, awards, forums and news). We hope that you find the website easy to navigate and that it is **your** source for information. As always we welcome your suggestions as the website (and Society) continues to evolve and grow.










Prizes and Awards

Check out the “**Prizes and Awards**” webpage for calls for nominations for the 2011 InterPore awards. A special thanks to Procter&Gamble for the new Procter&Gamble InterPore Award. Here you will also find the 2009 and 2010 award recipients and the winners of student award for the best poster presentation.

Forum

Our new forum is online! The forum is a platform for members to share information and experience. It can only be as lively and interesting as you make it, so we hope you will make active use of it! Please have a look and use the forum:

-  to introduce yourself and your activities
-  to share experience
-  to find information on summer schools, workshops and InterPore activities
-  to post job announcements
-  for information on your activities, articles, books
-  for technical discussions
-  for group activities

InterPore Forum			
HOME HELP SEARCH ADMIN PROFILE MY MESSAGES [1] MEMBERS LOGOUT		Members: 245 • Posts: 8 • Topics: 6	
Please welcome coco , our newest member!			
New Members			
	Round of Introduction	1 Posts 1 Topics	Last post by michelleh.test in hello from the webmaster on October 11, 2010, 05:36:10 PM
General Discussion			
	Forum Questions	3 Posts 1 Topics	Last post by test10 in Re: test on October 13, 2010, 09:59:58 PM
	Interpore Questions membership	0 Posts 0 Topics	
Activities and Events			
	Conferences	0 Posts 0 Topics	
	Summer School	0 Posts 0 Topics	
	Workshops	0 Posts 0 Topics	
	Awards	1 Posts 1 Topics	Last post by michelleh.test in Awards 2011 on October 21, 2010, 12:33:06 PM
	News from InterPore	0 Posts 0 Topics	
Books and Articles			
	News Articles	0 Posts	



COMMUNITY NEWS

News from the InterPore Website (cont'd from pg. 2)

If you would like to suggest further forum topics for the forum, please send an email to:

interpore_forum@iws.uni-stuttgart.de

Members-only Pages

Due to the launch of the new website it was necessary to create new accounts from the data we stored in our database. The easiest technical way was to create a new account for every existing member using the email prefix as account name. At that moment all passwords were reset. To log in to the website please use the "forgotten password" function on the homepage. Then the password reminder window is displayed. Please type your email address and click the send button. A few minutes later you will get a email with a link and your actual username for the website and forum. Click on the link to set a new password for your account. If you don't receive an email within a few minutes check your spam folder. If you have any problems to log in please send an email to

Michelle Hartnick (InterPore webmaster)

michelle.hartnick@iws.uni-stuttgart.de

InterPore member honoured by the American Geophysical Union (AGU)

Jacob Bear to receive the Robert E. Horton Medal at the AGU Fall Meeting 2010, San Francisco

Jacob Bear was one of the first porous media scientists to join InterPore. He is a Professor Emeritus in the Dept. of Civil & Environmental Engineering of the Technion--Israel Institute of Technology, Haifa, and the Dean of the School of Engineering at the Kinneret College on the Sea of Galilee, Zemach, Israel. Jacob Bear was the first recipient of the InterPore Honorary Membership Award in 2009, for his enormous contributions to the porous media science and community.

Established in 1974, the Horton Medal is named in honour of Robert E. Horton, who made significant contributions to the study of the hydrologic cycle. The Horton Medal is awarded to an individual "for outstanding contributions to hydrology".



With a career that spanned 50 years, **Robert Elmer Horton** is rightfully deemed the father of modern hydrology. In more than 100 papers, discussions, and reports, he contributed precisely those essential analytical concepts — with confirming experimental evidence — that resulted in our present understanding of the complex rainfall-runoff relationship.



INTERPORE ELECTION

Elections for InterPore President-Elect and Council Members

Dear InterPore Members,

Nominations for a new President-Elect and four new Council Members of InterPore are due until November 1st, 2010. The nomination and election process will be overseen by an elections committee made up of Drs. Wolfgang Nowak (Stuttgart, Germany) as Chair, and Massoud Kaviany (University of Michigan, USA) and Rien van Genuchten (Federal University of Rio de Janeiro, Brazil) as members. The election itself will take place in February 2011, using a web-based voting system designed by *ballotbin.com*.

Election Cycle and Personalia: The bylaws of the society stipulate an election every other year of a new President-elect and of four new Council Members. The new President-Elect will serve during the period April 1st 2011 – March 31st 2013, and will automatically assume the Presidency during the period April 1st 2013 – March 31st 2015. Elected Council Members will serve for four years on the new Council starting April 1st, 2011. The bylaws further state that the current President of InterPore (Dr. Rainer Helmig) must step down on April 1st, 2011, and cannot be re-elected for at least two years. The current President-Elect (Dr. Oleg Iliev) will automatically become President on April 1st, 2011. Retiring Council Members are Drs. Azita Ahmadi, Helge Dahle, Didier Lasseux, and Konrad Steiner. I am sure the entire InterPore community will join me in thanking Dr. Helmig and the current Council for their tremendous and successful efforts in growing InterPore into a thriving society.

Whom do we seek? At least three representatives from industry must run for offices as Council Members, and at least one of them must be elected to the council. Once all nominations are received, the council selects from the list of nominees two candidates who will run for President-Elect, and eight candidates for the four vacancies on the Council. Criteria for selection of candidates by the Council are personal qualifications, a good balance between industry and academia, and ensuring, to the extent possible, gender and geographical balance. Only nominees who agree to serve, once elected, will be accepted.

Please volunteer to run for an office and nominate candidates now! If you would like to run for President-Elect or for a Council seat, or would like to nominate someone, please contact Wolfgang Nowak, wolfgang.nowak@iws.uni-stuttgart.de. All candidates will be asked to provide a short biographical sketch (max. 1000 words). Nominees for President-Elect are also asked to provide a brief statement (max. 500 words) how they would promote the goals of our society. The elections committee urges you with great enthusiasm to become involved and to seriously consider running for President-Elect or Council Member.

On behalf of the InterPore Elections Committee,

Wolfgang Nowak
University of Stuttgart
(wolfgang.nowak@iws.uni-stuttgart.de)



RESEARCH AWARDS

Procter & Gamble Student Award 2011



The Procter and Gamble Student Award recognizes outstanding student poster presentations at the annual InterPore conference. Up to two awards will be made in 2011, with each award consisting of a prize of 500 Euros.

Eligibility

- Eligibility for the P&G Student Award is limited to Bachelors, Masters, and Doctoral students who present a poster at the InterPore conference. The work presented in the poster should have been carried out while the nominee was a student. To be considered, the nominee must currently be a student or must have completed her/his degree within one year of the InterPore conference. The poster must be presented by the nominated student.
- All topics relevant to the mission of InterPore and to the study of flow in porous media, broadly defined, will be eligible for this student award.

Assessment

The Committee will evaluate the presented posters using a set of criteria that include, but are not limited to, importance and relevance of the problem, innovation, scientific quality of the research, and quality of presentation, both visual and oral. For one of the two awards, additional consideration will be given to posters that address the following topics: thin porous media, including those whose thickness is the same order of magnitude as the pore sizes; interfaces between porous medium domains; and swelling porous media. Evaluations of the student posters will be made during the poster presentations, and award winners will be announced before the conclusion of the annual InterPore conference.

InterPore-Procter and Gamble Award for Porous Media Research, 2011



The InterPore-Procter and Gamble Award for Porous Media Research is given in recognition of outstanding contributions to topics related to swelling porous media, very thin porous media, and behaviour at interfaces. Nominees must be members of InterPore. Nomination packages should include full CV of the candidate, a nomination letter including explicit reference to the contributions to the aforementioned topics, and related documentation (publications, reports) supporting the nomination. Nomination packages should be submitted to:

nomination@interpore.org

Deadline for receipt of complete nomination packages is the **31st of January, 2011**. The prize will consist of an award of 5000 Euros plus a certificate.



RESEARCH AWARDS

Interpore - Fraunhofer Award for Young Researchers, 2011



INTERPORE



Fraunhofer ITWM

The International Society for Porous Media, InterPore, on behalf of the Fraunhofer Institute for Industrial Mathematics, ITWM, will grant in 2011 an Award to a Young Researcher at the PhD or Postdoc level, working in the areas of porous and composite materials modelling and computer simulation. Specific areas of research include mathematical modelling at all scales, analysis of deformable porous media, and characterization of porous media structure. The Award will be given in recognition of outstanding contributions to the above topics, and it will be presented during the InterPore conference 2011 in Bordeaux. Nominees must be PhD students or PostDoc researchers with at most 3 years of experience after completing the PhD. Nomination packages should include full CV of the candidate, a nomination letter including explicit reference to the contributions to the aforementioned topics, up to two additional supporting letters, and related documentation (publications, reports) supporting the nomination. Nomination packages should be submitted to:

nomination@interpore.org

Deadline for receipt of complete nomination packages is **January the 31st, 2011**. Award winners will spend a period of approximately three months working on joint research at Fraunhofer ITWM in the years 2011-2013. The award recipient will be paid a monthly stipend while in residence at Fraunhofer ITWM which totals approximately 5,000 Euros for a period of three months. The Award also includes a contribution to travel expenses, up to 300 Euro for a winner from Europe, and up to 500 Euro for a winner from outside Europe.



ANNUAL CONFERENCE



SECOND ANNOUNCEMENT 3rd International Conference on Porous Media & Annual meeting of the International Society for Porous Media 29-31 March 2011 Bordeaux Campus, FRANCE

Objectives

The objective of the conference is to bring together porous media theoreticians, modellers, and experimentalists from academia and industry and to provide a forum for exchanging ideas and expertise for advancing the porous media science. This includes problems around developing, producing and manufacturing porous structures, characterizing them, or analyzing flow and transport that in addition, may involve thermal, chemical and mechanical aspects. The conference aims to cover descriptions of physical mechanisms in porous media at many different scales ranging from the micro to the mega scale, using theoretical, numerical or experimental approaches. All industrial applications involving porous materials are of interest. These applications may concern manufactured materials like thin and/or swelling porous materials as involved in fuel cells, paper, diapers and moisture absorbents, textiles, agrifoodstuffs, filters, concrete, ceramics, polymer composites, detergent tablets ... The conference will also address natural porous media such as soils, aquifers, and reservoirs as well as biological tissues and plants.

Main topics include

- ▶ Up-scaling in porous media
- ▶ Thin porous media
- ▶ Swelling porous media
- ▶ Advanced numerical modeling
- ▶ Pore-scale modeling
- ▶ Biological porous media
- ▶ Heat transfer in porous media
- ▶ Multiphysics & coupled phenomena
- ▶ Experimental techniques for porous media research
- ▶ Imaging applied to porous media
- ▶ Dispersion and reactive transport
- ▶ Multiphase flow in porous media
- ▶ CO₂ sequestration - Nuclear waste storage

Format of the conference

Plenary lectures given by Keynote speakers followed by parallel sessions including invited and contributed talks. Selection of contributed oral and poster presentations will be made based upon the review of a two-page summary.

Plenary lectures will be given by: Martin Blunt (Imperial College, UK), Wolfgang Ehlers (Stuttgart University, Germany), Oliver Jensen (Nottingham University, UK), John Mc Kibben (Procter & Gamble, USA), Michel Quintard (IMFT CNRS, France).

Call for contributions

Authors are invited to submit a two-page extended abstract for poster or oral presentation.

Guidelines for submission are found on

<http://interpore2011.u-bordeaux.fr/>.

Important dates

Submission deadline	Notification to authors	Early registration
Extended to October 18 th , 2010	November 30 th , 2010	Till January 17 th , 2011 (30% increase after this date)



ANNUAL CONFERENCE

Chairs

Azita Ahmadi
Didier Lasseux

Azita Ahmadi
Sakir Amiroudine
Mejdi Azaiez
Henri Bertin

Local organizing committee

Muriel Boré
Sylviane Boya
Denis Bruneau

Frederic Lapègue
Didier Lasseux
Alain Sommier

International Scientific Committee

Philippe Ackerer (CNRS, Strasbourg, France)
Pierre Adler (University of Paris 6, France)
Azita Ahmadi (Arts et Métiers ParisTech, France)
Goodarz Ahmadi (Clarkson University, USA)
Brahim Amaziane (University of Pau, France)
Todd Arbogast (University of Texas at Austin, USA)
Pascal Audigane (BRGM, France)
Jean-Louis Auriault (University of Grenoble, France)
Jacob Bear (Kinneret College, Israel)
Lynn Bennethum (University of Colorado, USA)
Brian Berkowitz (Weizmann Institute of Science, Israel)
Dominique Bernard (CNRS, Bordeaux, France)
Henri Bertin (CNRS, Bordeaux, France)
Igor Bondino (TOTAL, UK)
Jesus Carrera (Technical University of Madrid, Spain)
John Cushman (Purdue University, USA)
Helge Dahle (University of Bergen, Norway)
Luc Dormieux (Ecole des Ponts ParisTech, France)
Jean-Priour Du Plessis (Stellenbosch University, South Africa)
Louis Durlafsky (Stanford University, USA)
Yalchin Efendiev (Texas A&M University, USA)
Robert Eymard (University of Paris-Est, France)
Margot Gerritsen (Stanford University, USA)
Majid Hassanizadeh (University of Utrecht, The Netherlands)
Rainer Helmig (Stuttgart University, Germany)
Rudolf Hilfer (Stuttgart University, Germany)
Jean-Pierre Hulin (CNRS, Orsay, France)
Oleg Illiev (Fraunhofer Institute, Germany)
Massoud Kaviany (University of Michigan, USA)

Alain Labastie (2011 SPE President)
Didier Lasseux (CNRS, Bordeaux, France)
Knut-Andreas Lie (SINTEF, Norway)
John McKibben (Procter & Gamble, USA)
Christian Moyne (CNRS, Nancy, France)
Marcio Murad (LNCC, Brazil)
Benoit Noetinger (IFP, France)
Jan Nordbotten (University of Bergen, Norway)
Dani Or (EPFL, Switzerland)
Pål-Eric Øren (Numerical Rocks, Norway)
Elena Palomo (University of Bordeaux, France)
Michel Panfilov (University of Nancy, France)
Andrea Peri (Procter & Gamble, Italy)
Marc Prat (CNRS, Toulouse, France)
Masa Prodanovic (University of Texas at Austin, USA)
Laura Pyrak-Nolte (Perdue University, USA)
Michel Quintard (CNRS, Toulouse, France)
Jean Roberts (INRIA, France)
Rodrigo Rosati (Procter & Gamble, Germany)
Mattias Schmidt (Procter & Gamble, Germany)
Konrad Steiner (Fraunhofer Institute, Germany)
Kambiz Vafai (University of California at Riverside, USA)
Gérard Vignoles (University of Bordeaux, France)
Olga Vizika (IFP, France)
Mary Wheeler (University of Texas at Austin, USA)
Stephen Whitaker (University of California at Davis, USA)
Dorthe Wildenschild (Oregon State University, USA)
Brian Wood (Oregon State University, USA)
Robert Zimmernan (Imperial College, UK)

Registration fee

Early registration (till January 17th, 2011) (30% increase after this date)

Academic members*: 160 €

Industrial members: 250 €

Academic non members*: 230 €

Industrial non members: 450 €

Academic + 2011 membership: 210 €

Industrial + 2011 membership: 300 €

Academic + 2011 student membership: 185 €

* Including students

Supplements

Registration for the tour: 50 €

Accompanying person, gala dinner: 55 €

Accompanying person, tour: 50 €

See <http://www.interpore.org/> for information on the INTERPORE Society.





WORKSHOPS etc.

NUPUS workshop on Interfaces and interfacial displacement processes in unsaturated porous media

The NUPUS workshop on "Interfaces and interfacial displacement processes in unsaturated porous media" will take place in Freudenstadt, Germany, from the 2nd until the 4th of February, 2011.

Keynote speakers

- **Majid Hassanizadeh**
Utrecht University,
The Netherlands
- **Rudolf Hilfer**
University of Stuttgart,
Germany
- **Ruben Juanes**
MIT, USA
- **Sjoerd van der Zee**
Wageningen University,
The Netherlands
- **Knut Jørgen Måløy**
University of Oslo, Norway
- **Paul Meakin**
Idaho National Engineering
and Environmental
Laboratory, USA
- **Marco Dentz**
CSIC, Spain
- **Jonas Toelke**
Ingrain Inc., Houston, USA

Information and registration

June 2010: First announcement
15 Sept 2010: Deadline for abstract
 submission
30 Oct 2010: Decision on abstract acceptance
15 Dec 2010: Deadline for registration/payment

For additional information and abstract submission
<http://www.musis-workshop2011.uni-hannover.de>

Location/Accommodation:

Waldhotel Zolzenblick
 D-72250 Freudenstadt-Lauterbad
 Schwarzwald
 Am Zolzenblick 1

Organizing committee

- *Manfred Krafczyk* (TU Braunschweig)
- *Peter Lehmann and Dani Or* (ETH Zurich)
- *Hans-Jörg Vogel* (UFZ Halle)
- *Rainer Helmig* (Universität Stuttgart)
- *Wolfgang Dumer* (TU Braunschweig)
- *Jan Vanderborght* (FZ Jülich)
- *Insa Neuweiler* (LU Hannover)



First Announcement International Workshop

Interfaces and interfacial displacement in unsaturated porous media

**02-04 February 2011
Lauterbad, Black Forest**





WORKSHOPS etc.

SimTech 2011

International Conference on Simulation Technology
Stuttgart, 14-17 June 2011

The porous media research community is invited to the International Conference on Simulation Technology (SimTech 2011) to be held in Stuttgart, Germany from 14 to 17 June 2011. During a four day period, the University of Stuttgart will gather experts in the fields of molecular dynamics, multi-scale and multi-physics mechanics in porous media, numerical mathematics and interactive visualization.

More than 150 scientists from the University of Stuttgart are currently conducting state-of-the-art research within the SimTech cluster. At SimTech 2011, through a series of plenary lectures, leading scientists introduce current insights from the scientific world of simulation technologies in topics ranging from environmental applications to complex biomechanics.

Poster applications are encouraged and one-page abstracts can be uploaded by the end of November 2010 on the conference's website: www.contoo.de/c/simtech2011.

Your abstract must clearly demonstrate the relevance to one of SimTech's topics of interest. Decisions about acceptance are based on relevance, originality, potential significance and clarity. If your submitted abstract is accepted, you are welcome to upload your poster and present it during the conference. Additionally, we will invite a fraction of the participants to write a paper for the conference proceedings.

- Molecular and Particle Simulations
- Advanced Mechanics of Multi-Scale and Multi-Field Problems
- Systems Analysis and Inverse Problems
- Numerical and Computational Mathematics
- Integrated Data Management and Visualisation
- High Performance Computing and Simulation Software Engineering
- Integrative Platform of Reflection and Evaluation

List of Topics of SimTech 2011

- Michael A. Celia (Princeton University)
- Wolfgang Dahmen (RWTH Aachen)
- Thomas J. R. Hughes (University of Texas at Austin)
- Michael Ortiz (California Institute of Technology)
- Klaus Schulten (University of Illinois)
- Christopher Johnson (University of Utah)
- Horst Simon (Lawrence Berkeley National Laboratory)

Selection of Plenary Speakers

- Submission of one-page abstracts: 30 November 2010
- Notification of acceptance: 31 January 2011
- Submission of posters: 31 March 2011

Call for Posters

Visit the website of the conference:
www.contoo.de/c/simtech2011



Universität Stuttgart



RESEARCH POSITIONS

Research Officer and Research Associate

There is a collaborative initiative involving the Universities of Bath (Dr. Rob Scheichl), Nottingham (Prof. Andrew Cliffe) and Oxford (Prof. Mike Giles) and is supported by a recent UK EPSRC research grant (Mathematics and Energy Mission Programmes) on the subject of "Multilevel Monte Carlo methods for elliptic PDEs with applications to radioactive waste disposal". There are two positions available, one in Bath and the other in Nottingham:

- **Research Officer** (Department of Mathematical Sciences, University of Bath)
- **Research Associate** (School of Mathematical Sciences, University of Nottingham)

Available from the 1st of January, 2011, and should be filled by the 31st of March, 2011. The successful applicants should hold (or be close to completing) a PhD degree in Mathematics (or equivalent), and preferably have significant experience of programming and implementation of numerical methods. A strong background in numerical analysis and a good knowledge of the fundamentals of probability theory are essential.

Experience in some of the following areas will be a distinct advantage: numerical methods for PDEs with random inputs; infinite dimensional stochastic analysis; quasi-Monte Carlo methods for high-dimensional integration; groundwater flow modelling; development of scientific software on modern (multi-processor) architectures; C++, MPI, GPU programming.

Informal enquiries regarding the respective positions may be addressed to:

- Dr. Rob Scheichl (R.Scheichl@bath.ac.uk, +44 (0)1225 386989)
- Prof. Andrew Cliffe (Andrew.Cliffe@Nottingham.ac.uk, +44 (0)115 8468287)

For more details and/or to apply on-line please access:

- <http://www.bath.ac.uk/jobs/JK257>

for the post at the University of Bath (Please quote ref. number #JK257) and

- <http://jobs.nottingham.ac.uk/jobs/currentvacancies/ref/SCI903>

for the post at the University of Nottingham (Please quote ref. number #SCI/903). Applicants who are interested in being considered for either post are encouraged to do so. Please submit separate applications at both institutions. The closing date for applications is Sunday the **24th of October 2010**.

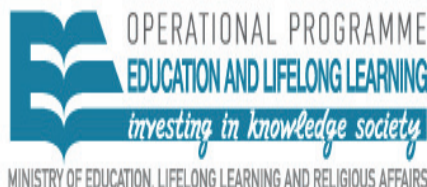
Postdoctoral Position

A research-only postdoctoral position in "characterization and multiphase flow modelling of low permeability formations" is available at the University of Texas at Austin under supervision of Drs. M. Prodanovic and S. Bryant. For more information, please visit

http://users.ices.utexas.edu/~masha/PostDocUTAustinCPGE_2010_09.pdf



RESEARCH POSITIONS



Co- Financed by the European Union and the Greek State

Greece: Funding Opportunities for Postdoctoral Research

The Greek Ministry of Education, Lifelong Learning and Religious Affairs invites all interested beneficiaries to submit proposal summaries for their inclusion in the Action "Support of Postdoctoral Researchers". The aim of this Action is to facilitate the acquirement of new research skills by Postdoctoral Researchers (PR) that will promote their career development in any field and/or help them restart their careers after a leave of absence (but no more than seven (7) years following their doctorate conferment date). Emphasis will be given to the support of new scientists at the beginning of their career. The duration of the research projects should range from 24 to 36 months. Each candidate can submit only one (1) research proposal.

The total public cost of the present call is 30.000.000€ and it is co-financed by the ESF (European Social Fund). The maximum budget for each project is 150.000€. At least 60% of the total budget should be related to costs pertaining to activities undertaken by the PR and should include a monthly net allowance of 1.600€, subject to cost-of-living adjustments for different countries.

The potential beneficiaries of this call must be either:

- Greek or foreign nationals that have acquired their doctorate from a non-Greek University. These researchers should undertake their research in a University/Research Institution within Greece or
- Greek nationals that have acquired their doctorate from a Greek University. These researchers may undertake their research in a University/Research Institution either in Greece or abroad. In the first case the host Institution should differ from the University where the candidate PR obtained his/her doctorate and the PR should collaborate with a scientist other than his/her PhD supervisor. In the second case the PR should undertake the first 2/3 of his/her research in a University/Research Institution outside Greece and the final 1/3 in a University/Research Institution within Greece.

A two-stage submission procedure will be followed. Please, note that at this stage (i.e. 1st stage) the PRs are not required to have established cooperation with the host Institution. They only need to indicate where (University/Research Institution) and with whom (Faculty member or Research Scientist of a public Research Institution that holds a PhD degree) they would like to cooperate. If a proposal is positively assessed during the evaluation of summaries (1st stage), the respective PR will be asked to submit a full proposal (2nd stage) as well as contact the proposed host Institution to ensure collaboration. All summaries (as well as the full proposals at the 2nd evaluation stage) will be reviewed by international experts. Further information for the 2nd submission stage will become available in the near future.

All interested beneficiaries should register at <http://postdoc-ypepth.opengov.gr/register> and submit their summaries at <http://postdoc-ypepth.opengov.gr/>

The summaries submission deadline is the **20th of November, 2010 at 22:00 GMT**.
For technical support please contact postdoc_support@ypepth.gr



RESEARCH POSITIONS

Vacant position as postdoctoral fellow

At the Department of Mathematics there is a vacant position as post-doctoral fellow for 2 years within the project "Modelling transport in porous media over multiple scales".

The project and position is funded by the Research Council of Norway and the University of Bergen under the Outstanding Young Investigator program. The successful candidate will join a research team which aims at integrating the fields of upscaling, multi-scale methods and numerical linear algebra within the context of multi-phase flow in porous media. Applications of particular interest include oil and gas recovery as well as CO_2 storage. The project will address both theoretical and practical issues, and the candidate will be expected to familiarize him/herself with a broad spectrum of knowledge to form an active part of the research team.

We are soliciting applications from candidates with a background in applied mathematics. Special qualifications which should be emphasized in the application are familiarity with numerical methods for partial differential equations, multi-level preconditioners, multi-phase flow in porous media and programming.

Applicants must have achieved a Norwegian doctorate or equivalent, or have presented the dissertation for assessment by the closing



date for applications. It is a prerequisite that the dissertation has been approved before appointment is granted.

For further information about the position please contact Associate Professor Jan Martin Nordbotten, e-mail jan.nordbotten@math.uib.no

The deadline for applications is 1 December 2010.

Please see www.jobbnorge.no/job.aspx?jobid=69503&uid=3949 for official announcement and application form.



UNIVERSITY OF BERGEN
Department of Mathematics



RESEARCH POSITIONS



Senior Researcher in CO₂ - Centre for Integrated Petroleum Research (CIPR)

CIPR is the only Norwegian Centre of Excellence for petroleum research. The centre consists of an international research group with more than 100 researchers and PhDs. CIPR also supervise more than 35 Masters students at the University in Bergen. More information at www.uni.no/cipr.

The position

The position is part of Uni CIPR's engagement in the CEER center for CO₂ storage SUCCESS which runs for eight years. The working location is CIPR. The position is part of the activity "CO₂ storage – Fluid flow and reservoir modeling". This activity contains modeling of fluid flow during and after the CO₂ injection period. The focus is on processes which are generally not covered by commercial reservoir simulators. The aim of this activity is realistic mathematical descriptions and reliable numerical methods for these processes. The candidate is expected to maintain good contact with research groups in industry and academia, both nationally and internationally.

Qualifications required:

- Ph.D. or similar degree. The candidate should have a strong background in applied and computational mathematics and in modeling of subsurface flow.
- Strong skills for written and oral communication.

We can offer

- Dynamic and challenging research environment
- Competitive salary
- Personnel Insurance Scheme
- Group Pension Insurance

How to apply

Please send your electronic application to apply-cipr@uni.no before **October 31, 2010**

The email should be marked "Senior Researcher CO₂" and contain:

- CV
- scanned copies of diplomas and transcripts,
- list of publications and other relevant work,
- name, title and email address of at least two scientists willing to provide a reference.

Applications must be complete in order to be evaluated

Selection procedure

Selected candidates will be invited for an interview and to give a short presentation on a topic of their choice.

For more information, please contact Professor Ivar Aavatsmark at tel. +47 555 83 544 or ivar.aavatsmark@uni.no



RESEARCH POSITIONS



EPSRC Industrial CASE Studentship

Microneedle Array And Formulation Optimisation For Pain Management

Loughborough University - Department of Chemical Engineering, Loughborough University, UK, in partnership with Nemauro Pharma, Loughborough, UK

We wish to appoint a **fully funded PhD** student through the **EPSRC Industrial CASE** studentship award scheme. The studentship is available to **UK/EU residents** with the equivalent of a first class (1st) or upper second class (2:1) degree in relevant disciplines, e.g. **engineering and analytical sciences**. We are particularly keen to receive applications from prospective students with backgrounds in **Chemical Engineering, Biotechnology, Pharmaceutical Engineering** or **Pharmacy, Chemistry**, etc, with relevant research experience in a **laboratory and/or industrial** setting.

The aim of the project is to **optimise the formulation** of a drug and the **geometry of a microneedle** based device for pain management. The project should lead to more efficient and painless drug delivery over a large surface area of the body using the device. The student will **test, evaluate** and **optimize** drug formulation and **combine** these results with some modelling exercise to achieve the overall goal.

The student will be based within the **Chemical Engineering Department** at Loughborough University, Loughborough while regularly using the laboratory facilities within the industrial partner. The student will be expected to build on the established relationship between the industrial partner and the Loughborough University and, take a leading role in other academic activities (e.g., writing peer reviewed journal papers, attend conference) in consultation/agreement with the supervisors of this project. Completing the required tasks within predetermined time scale would be mandatory. **The studentship will commence on 1 December 2010 or soon afterwards lasting for a maximum of 42 months**. Please note that the EPSRC funding eligibility rules would apply to this studentship. Therefore, applicants must have a relevant connection with the UK (established by residency). For more information on the eligibility, please visit:

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The stipend includes a tax free £13,590pa. More information on this can be found at

<http://www.epsrc.ac.uk/funding/students/Pages/minimumpay.aspx>
<http://www.lboro.ac.uk/prospectus/pg/essential/apply/index.htm>

To apply, please send a recent CV, covering letter and the filled in application form to:

Ms Anna Temple, Department of Chemical Engineering, Loughborough University, Loughborough, Leicestershire, LE11 3TU, United Kingdom (Email: A.Temple@lboro.ac.uk)

The closing date for this position is **22nd of October 2010**. Please quote reference **DAS-Case1** on all correspondence. Informal discussion may be addressed to **Dr. DB Das (D.B.Das@lboro.ac.uk)**



NEW BOOKS

Discover approaches to effectively apply porous media concepts to biomedical applications

New!

Porous Media Applications in Biological Systems and Biotechnology

Edited by Kambiz Vafai • University of California, Riverside, USA

The First Book to Cover the Applications of Porous Media Theory in Biomedical and Biological Sciences

Presenting state-of-the-art research advancements, **Porous Media: Applications in Biological Systems and Biotechnology** explores innovative approaches to effectively apply existing porous media technologies to biomedical applications. In each peer-reviewed chapter, world-class scientists and engineers collaborate to address significant problems and discuss exciting research in biological systems.

The book begins with discussions on bioheat transfer equations for blood flows and surrounding biological tissue, the concept of electroporation, hydrodynamic modeling of tissue-engineered material, and the resistance of microbial biofilms to common modalities of antibiotic treatments. It examines how biofilms influence porous media hydrodynamics, describes the modeling of flow changes in cerebral aneurysms, and highlights recent advances in Lagrangian particles methods. The text also covers passive mass transport processes in cellular membranes and their biophysical implications, the modeling and treatment of mass transport through skin, the use of porous media in marine microbiology, the transport of large biological molecules in deforming tissues, and applications of magnetic stabilized beds for protein purification and adsorption, antibody removal, and more. The final chapters present potential *in situ* characterization techniques for studying porous media and conductive membranes and explain the development of bioconvection patterns generated by populations of gravitactic microorganisms in porous media.

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- Discusses the modeling of several phenomena, including flow changes in cerebral aneurysms, biomass growth, marine systems, and tissue homeostasis and repair

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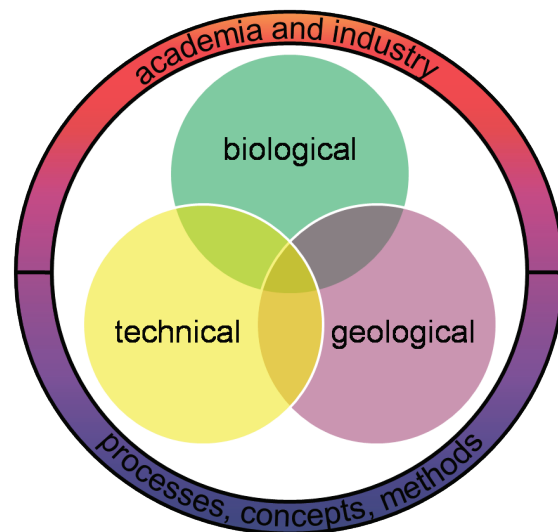
The general aim of the Society is to advance and disseminate knowledge for the understanding, description, and modeling of natural and industrial porous media systems.

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- 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.

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