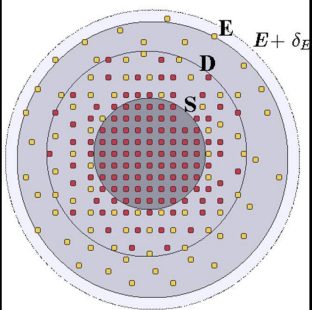


Swelling



S: Swelling Front – water acts as a plasticizer reducing the glass transition temperature to the experimental temperature causing the polymer to flow and swell.

D: Diffusion Front – High drug loadings or poorly soluble drugs (maximum solubility is reached)

E: Erosion Front – polymer disentanglement caused by macromolecular-level snake like motion of polymer chains.

$E + \delta_E$: Boundary Layer –

LOCAL ORGANIZERS

John H. Cushman

Natalie Kleinfelter-
Domelle

Eric Nauman

Laura Pyrak-Nolte

Martin Ostoja-
Starzewski

Dongbin Xiu

4th International Conference on Porous Media & Annual Meeting of the International Society for Porous Media May 14-16, 2012



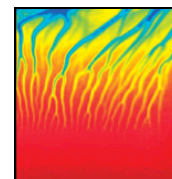
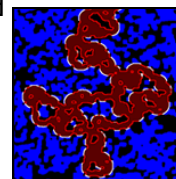
www.physics.purdue.edu/Interpore2012

Objectives

Chair:
Prof. John H. Cushman

The objectives of the conference are to bring together porous media theoreticians, modelers, and experimentalists from academia and industry, to provide a forum for exchanging ideas and expertise for advancing the porous media science, and to search for a commonality of tools and techniques. This includes problems around developing, producing and manufacturing porous structures, characterizing them, or analyzing flow and transport that may involve thermal, chemical, electrical and mechanical aspects. The conference aims to cover descriptions of physical mechanisms in porous media at many different scales ranging from angstroms to the 100^s of kilometers, using theoretical, numerical or experimental approaches. All industrial applications involving porous materials are of relevance such as fuel cells, paper, moisture absorbents, textiles, food stuffs, concrete, ceramics, and polymer composites (e.g., drug delivery devices). Natural porous media such as soils, aquifers, reservoirs, biological tissues and plants are also of direct relevance to the meeting.

This dual-mode way of approaching science by providing an environment that encourages scientists to look seriously at the theory and encourages mathematicians to look more seriously at the physics.



International Society for Porous Media (www.interpore.org)

The mission of Interpore is to establish and act as an international platform for researchers that are active in modeling flow and transport in complex porous media. Interpore is a unique platform that connects experts and practitioners from diverse research fields. It facilitates the exchange of scientific and engineering know-how between academic and industrial applications. This enables faster and unexpected connections, resulting in quicker learning and accelerated innovation.

Purdue University
School of Engineering



Purdue University
School of Science

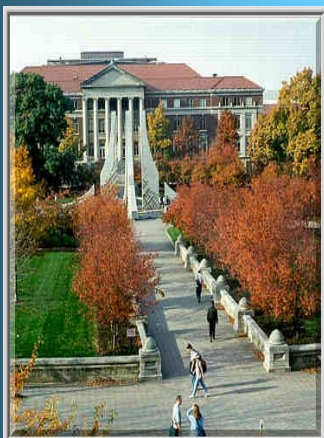


Topics

Abstract Deadline Extended until February 1, 2012

Engineered Porous Media
Geophysical Porous Media
Drug Delivery Substrates
Swelling Porous Media
Mesoporous Solids (MOF's)
Advanced Numerical Modeling
Pore-Scale Modeling
Biological Porous Media
Transport in Food and Biological Systems
Insitu Combustion
Heat Transfer in Porous Media
Pore-scale Visualization
Magnetic Resonance in Porous Media
Multiscale Experimental Techniques
From Structure to Transport in Porous Media
Multiphysics and Coupled Processes
Two-phase Flow at High Re, Ca, Bo
Thin Porous Media
Challenges and Solutions in Microbially
Induced Calcite Precipitation: Theory, Experiment, and Simulation
Mixing and Reactive Transport in Natural and Engineered Porous Media
Quantitative Measures of Scale, Mixing and Diffusion in Porous Media
Multiphase Flow in Porous Media
Dissolution and Capillary Trapping During CO₂ Sequestration
Energy Sources
Nanopores
Sequestration: Experimentation, Multiscale Modeling, and Simulation
Nonlinear Deterministic Processes
Nonlinear Stochastic Processes in Porous Media
Granular Media
Tight Porous Media
Fundamentals of Modeling Flow and Transport in Porous Media
Reservoir Modeling With Uncertainty
Inertial Flows in Porous Media
Colloid Transport in Porous Media

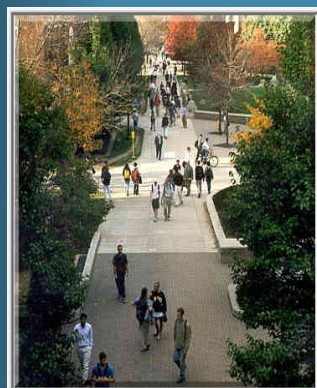




Fountain, Purdue Mall



Purdue University Mall



View from Electrical Engineering Building
Purdue University



Award Banquets

Interpore: Honorary Member Award

Interpore: Fraunhofer Award for Young Researcher

Interpore: Proctor & Gamble Award

Interpore: Proctor & Gamble Student Award

Registration Fees

Early registration until (March 31, 2012 - 30% Increase after this date)

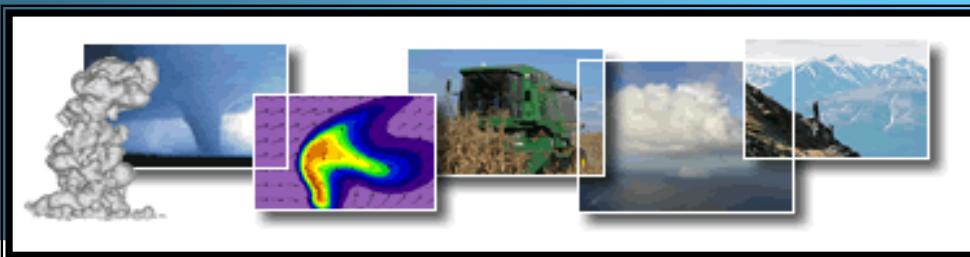
Academic Members:	\$350
Academic Non-Members:	\$450
Academic + 2012 Membership:	\$400
Academic + 2012 Student Membership:	\$375
Industrial Members:	\$425
Industrial Non-Members:	\$675
Industrial + 2012 Membership:	\$500
Accompanying person, gala dinner:	\$50

www.physics.purdue.edu/Interpore2012

Format of 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 an extended abstract.

Plenary lectures will be given by: Tissa Illangasekare (Multiphase Flow), Steve Cowin (Biotissue-CUNY), Gerald Pollack (Interfacial Water, University of Washington), Stephan Fell (Fuel Cells, GM Adam Opel) and Paul Eric Oren (Founder and Director of Numerical Rocks).



Program Committee

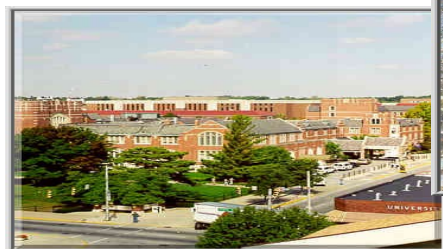
Todd Arbogast
Rudolf Hilfer
Martin Ostoja-Starzewski

Lynn Bennethum (Chair)
Mattias Schmidt

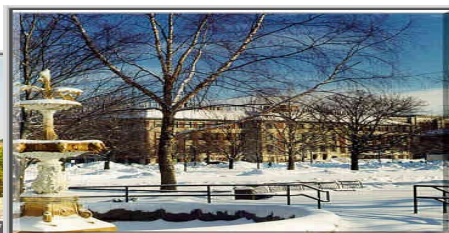
*If you would like to organize a session around a topic, please go to www.physics.purdue.edu/Interpore2012

International Scientific Committee

Pierre Adler (University of Paris 6, France)	Azita Ahmadi (Arts et Metiers ParisTech, France)
Todd Arbogast (University of Texas at Austin, USA)	Jacob Bear (Kinneret College, Israel)
Lynn Bennethum (University of Colorado at Denver, USA)	David Benson (Colorado School of Mines, USA)
Dominique Bernard (CNRS, Bordeaux, France)	Martin Blunt (Imperial College, London)
Jesus Carrera (Technical University of Madrid, Spain)	Patricia Culligan (Columbia University, USA)
John Cushman (Purdue, USA)	Natalie Kleinfelter-Donelle (St. Mary's, USA)
Timothy Ginn (University California at Davis, USA)	Majid Hassanzadeh (University of Utrecht, Netherlands)
Rainer Helmig (Stuttgart University, Germany)	Rudolf Hilfer (Stuttgart University, Germany)
Dionisis Hristopoulos (Tech University of Crete, Greece)	
J.M. Huyghe (Eindhoven University of Tech, Netherlands)	Oleg Illiev (Fraunhofer Institute, Germany)
Didier Lasseux (CRNS, Bordeaux, France)	Martin J. Lehmann (Mann-Hummel GMBH)
Knut-Andreas Lie (SINTEF, Norway)	John McKibben (Proctor & Gamble, USA)
Monica Moroni (University of Rome 1, Italy)	Marcio Murad (LNCC, Brazil)
Eric Nauman (Purdue, USA)	Benoit Noetinger (IFP, France)
Laura Pyrek-Nolte (Purdue, USA)	Jan Nordbotten (University of Bergen, Norway)
Dani Or (ETH, Zurich)	Felipe Pereira (University of Wyoming, USA)
Michel Quintard (CNRS, Toulouse, France)	Jean Roberts (NRIA, France)
Rodrigo Rosati (Proctor & Gamble, Germany)	Tom Russell (NSF, USA)
Martin Schoen (Berlin Tech, Germany)	Mattias Schmidt (Proctor & Gamble, Germany)
Joe Seymour (Montana St., USA)	Martin Ostoja-Starzewski (University of Illinois, USA)
Pawan Takhar (Texas Tech, USA)	
Daniel Tartovsky (University of California San Diego, USA)	Mary Wheeler (University of Texas at Austin, USA)
Brian Wood (Oregon State University, USA)	X-H. Wu (Exon Mobile, Upstream Research)
Dongbin Xiu (Purdue, USA)	



**Purdue University
Campus**



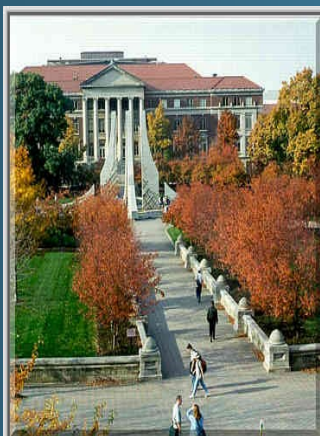
**Fountain Near John
Purdue Grave,
Purdue University**



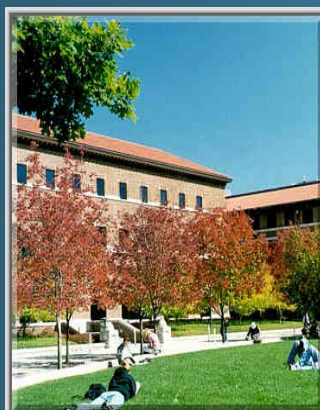
**Founders Park at
Purdue University**



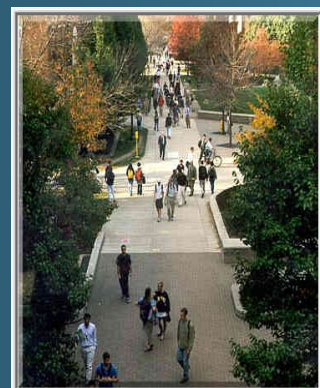
Lodging Selections & Rates



Fountain, Purdue Mall



Purdue University Mall



**View from Electrical Engineering Building
Purdue University**

Union Club

Single: **\$ 92.00**

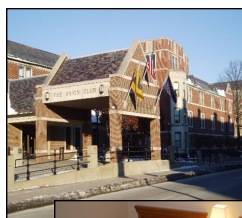
Double: **\$100.00**

Double

Deluxe: **\$119.00**

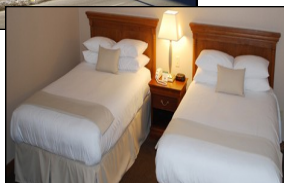
Cut-off Date:
04/14/2012

All Union Club rooms have private bath, air-conditioning, remote equipped color television fed by the university cable system, work desk, lounge chair, voice mail, two-line speaker phone, complimentary wired and wireless internet access, electronic locks, coffee makers, irons/ironing boards, hair-dryers, sprinkler system, smoke detection system, and queen length beds.



Union Club Hotel

101 N. Grant Street
West Lafayette, IN 47906
Ph: (765) 494-8900
Fx: (765) 494-8924
Toll Free: (800) 320-6291



First St. Towers

Single: **\$62.00**

***Will support only
(1) student at
\$62.00 per night.**

Cut-off Date:
04/14/2012

Single air-conditioned rooms with private baths are arranged in clusters around a central living room/dinette area. The building was designed with upperclassmen in mind and included input from residents during the initial planning stages. The final design was intended to meet the needs of today's student with an eye to the future.



First St. Towers Purdue University

1250 First Street
West Lafayette, IN 47906
Ph: (765) 494-1023

Hilton Garden

King: **\$98.00**

Queen: **\$98.00**

Cut-off Date:
04/14/2012

You'll find everything you need including complimentary high-speed Internet access with secure PrinterOne remote printing, in all the guestrooms. The Hilton Garden Inn is certain to please the executive and leisure traveler with complimentary workout facility and stay fit kits, indoor heated pool, complimentary 24-hour business center, shuttle service and self parking, pavilion lounge, 24-hour pavilion pantry convenience mart, evening room service,



Hilton Garden Inn Wabash Landing

356 E State Street
West Lafayette, IN 47906
Ph: (765) 743-2100
Fx: (765) 743-6520



University Plaza

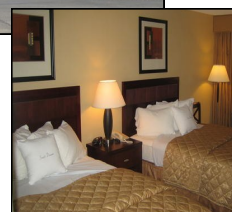
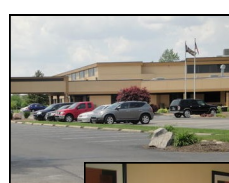
Single: **\$99.00**

Double: **\$99.00**

Double
Deluxe: **\$119.00**

Cut-off Date:
04/14/2012

Just one mile from Purdue University and features the Garden Cafe and the Tailgate Grille & Bar. The University Plaza has an indoor and outdoor pools/Jacuzzi, complimentary high speed wireless Internet access, 24-hour business center, shuttle to Purdue University (some time and date restrictions), laundry/valet, Wii Zone, family friendly atrium, totally smoke free hotel.



University Plaza Hotel

3001 Northwestern Ave.
West Lafayette, IN 47906
Ph: (765) 463-5511

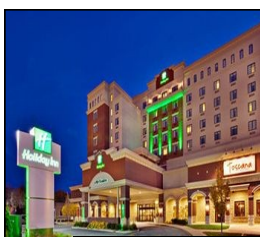
Holiday Inn

Single: **\$109.00**

Double: **\$109.00**

Cut-off Date:
04/14/2012

Our downtown Lafayette hotel rooms offer more than comfort. Besides being bright, airy, spacious, these rooms include free Internet access, a large TV with HBO and a comfortable easy chair with an ottoman. Beds have upgraded, triple sheeted linens and pillow choice for a great night's sleep. DVD player, phone, fax, indoor pool, data services, room service limited times, iron/ironing board, fitness facility, restaurant, air conditioning, coffee maker, satellite.



Holiday Inn-City Centre

515 South Street
Lafayette, IN 47901
Ph: (765) 423-1000



Lafayette Limo— Rates Fares

TYPE	ONE WAY	ROUNDRIP
Adult	\$27.00	\$50.00
Child (2-12 years old)	\$14.00	\$25.00
Child (under 2)	FREE	FREE
Commuter (Same day roundtrip)	N/A	\$27.00

Lafayette Limo (Shuttle Service)

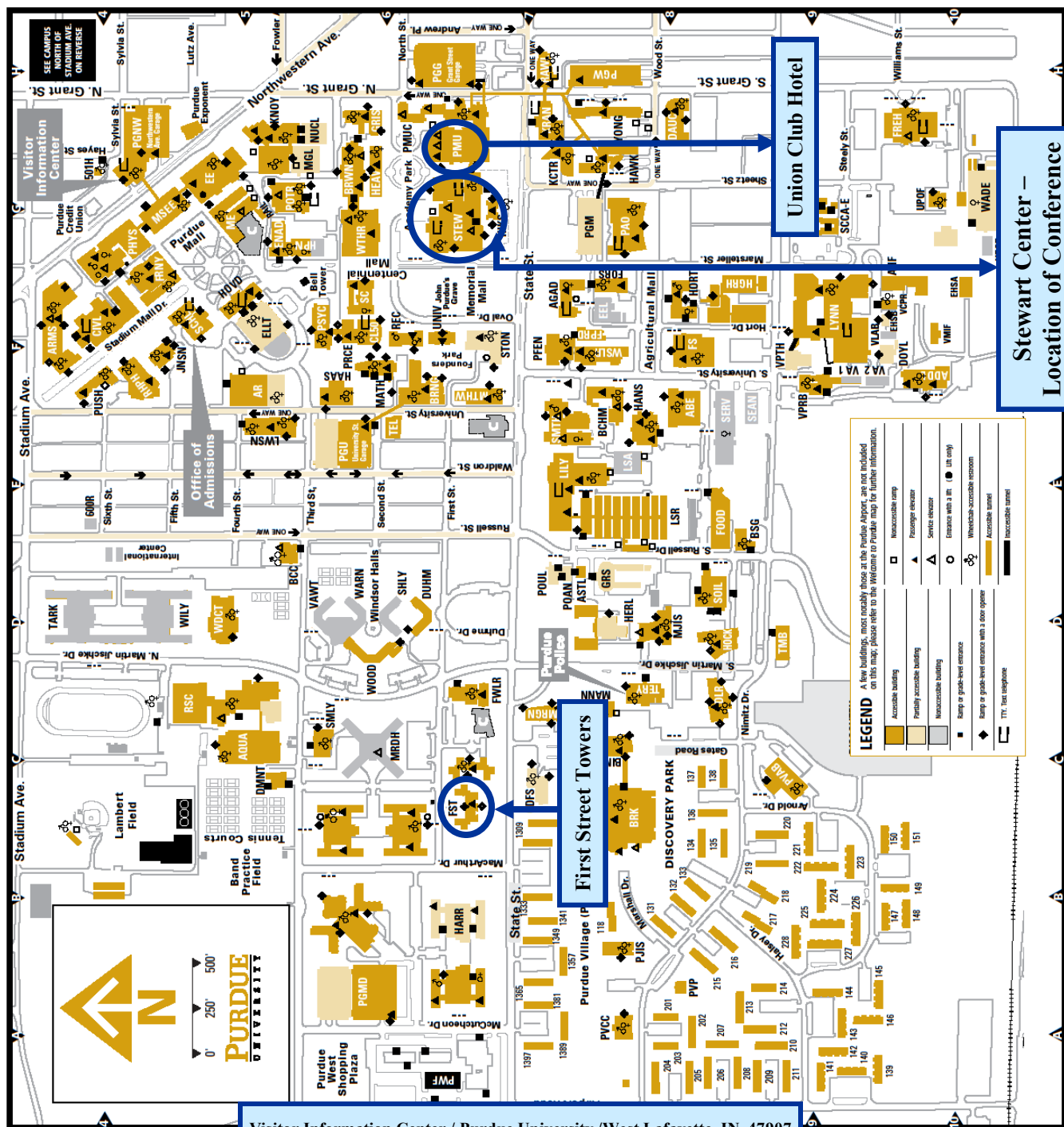


	L-A1	L-A2	L-A3	L-A4	L-A5	L-A6	L-A7	L-A8	L-A9
LEAVE									
Indianapolis Airport	6:30AM	8:30AM	10:30AM	12:30AM	2:30PM	4:30PM	6:30PM	8:30PM	10:30PM
ARRIVE									
Best Western	7:40AM	9:40AM	11:40AM	1:40PM	3:40PM	5:40PM	7:40PM	9:40PM	11:40PM
Purdue Mem Union	8:00AM	10:00AM	12:00PM	2:00PM	4:00PM	7:00PM	8:00PM	10:00PM	12:00PM
Follet's Purdue West	8:10AM	10:10AM	12:10PM	2:10PM	4:10PM	7:10PM	8:10PM	10:10PM	12:10PM
University Plaza	8:20AM	10:20AM	12:20PM	2:20PM	4:20PM	7:20PM	8:20PM	10:20PM	12:20PM
Lafayette Limo Office	8:30AM	10:30AM	12:30PM	2:30PM	4:30PM	7:30PM	8:30PM	10:30PM	12:30PM

	L-A1	L-A2	L-A3	L-A4	L-A5	L-A6	L-A7	L-A8	L-A9
LEAVE									
Lafayette Limo Office	4:30AM	6:30AM	8:30AM	10:30AM	12:30PM	2:30PM	4:30PM	6:30PM	8:30PM
University Plaza	4:35AM	6:35AM	8:35AM	10:35AM	12:35PM	2:35PM	4:35PM	6:35PM	8:35PM
Follet's Purdue West	4:45AM	6:45AM	8:45AM	10:45AM	12:45PM	2:45PM	4:45PM	6:45PM	8:45PM
Purdue Mem Union	4:55AM	6:55AM	8:55AM	10:55AM	12:55PM	2:55PM	4:55PM	6:55PM	8:55PM
Best Western	5:15AM	7:15AM	9:15AM	11:15AM	1:15PM	3:15PM	5:15PM	7:15PM	9:15PM
ARRIVE									
Indianapolis Airport	6:30AM	8:30AM	10:30AM	12:30AM	2:30PM	4:30PM	6:30PM	8:30PM	10:30PM

Building Index

building abbreviations on the accessibility map correspond to those on the Welcome to Purdue campus map. A few buildings, most notably those at the Purdue Airport and the Purdue Research Park, are not included on this map. Please refer to the Welcome to Purdue map for further information.

[illegible]

Visitor Information Center / Purdue University / West Lafayette, IN 47907
(765) 494-4636 Fax: (765) 496-1207 E-mail: visitorcenter@purdue.edu