International Conference Scaling Up and Modeling for Transport and Flow in Porous Media, Dubrovnik, Croatia, 13-16 October 2008
http://web.math.hr/~jurak/Dubrovnik08/ contact: upscaling08@math.hr
Conference Program

IP : Invited Presentation **CP :** Contributed Presentation

Sunday 12 October

Time	
06:00 pm-09:00 pm	**Registration (CAAS)**

Monday 13 October

Time	Conference Hall	
07:30 am – 08:30 am	**Registration**	
08:30 am – 09:00 am	**Opening (Conference Hall)**	
09:00 am – 09:30 am	**François Murat**: Finite Elements Approximation of Second Order Linear Elliptic Equations in Divergence Form with Right-Hand Side in L^1	
09:30 am – 10:00 am	**Andrey Piatnitski**: Homogenization of Spectral Problem for Elliptic Differential Operators with Sign-Changing Density	
10:00 am – 10:30 am	**Guy Bouchitté**: About Existence for Optimal 1-Rectifiable Transports	
10:30 am – 11:00 am	**Coffee break**	
	Session I- Conference Hall	**Session II- Lecture Room 4**
11:00 am – 11:20 am	**O. Angelini**: A Hybrid Finite Scheme for a Diffusion Problem, Satisfying a Local Principle of Maximum	**N. Antonić**: Small-Amplitude Homogenisation of Parabolic Problems
11:20 am – 11:40 am	**G. R. Barrenechea**: A Two-Level Enriched Finite Element Method for the Darcy Equation	**M. Arisawa**: Homogenizations of Integro-Differential Equations with L{é}vy Operators
11:40 am – 12:00 am	**K. Brenner:** A finite volume method on general meshes for a time evolution convection-diffusion equation.	**G. Dagan**: Formulation of the Problem of Upscaling of Solute Transport in Highly Heterogeneous Formations
12:00 am – 02:00 pm	**Lunch break**	
02:00 pm – 02:30 pm	**Mikhail Panfilov**: Macro-Kinetic Model and Oscillatory Regimes of Gas-Liquid Flow in Porous Media with Boiling and Bubble Coalescence	
02:30 pm – 03:00 pm	**Michel Quintard**: Upscaling Dissolution Mechanisms in Porous Media	
03:00 pm – 03:30 pm	**Gilles Bernard-Michel**: Transport of Radionuclides in a Synthetic Fractured Block. Comparisons between Different Approaches for the Numerical Simulations, Depending on the Degree of Connectivity of the Fractures	
03:30 pm – 04:00 pm	**Jacques Blum**: Back to the Future: the Back and Forth Nudging Algorithm	
04:00 pm – 04:30 pm	**Coffee break**	

	Session I- Conference Hall	Session II- Lecture Room 4
04:30 pm – 04:50 pm	**C. Engwer**: An Unfitted Discontinuous Galerkin Finite Element Method for Numerical Upscaling in Porous Media	**M. Drouin**: Modeling of Thermal Dispersion in Heated Pipes
04:50 pm – 05:10 pm	**O. Gipouloux**: A Numerical Method for an Underground Waste Repository Problem with Non Standard Interface Condition	**F. Golfier**: Comparison of Theory and Experiment for Solute Transport in Bimodal Heterogeneous Porous Medium

Tuesday 14 October

Time	Conference Hall	
09:00 am – 09:30 am	**Guy Chavent**: Global Pressure Revisited: Three Phase Compressible Flows	
09:30 am – 10:00 am	**Grégoire Allaire**: Homogenization Approach to the Dispersion Theory for Reactive Transport through Porous Media	
10:00 am – 10:30 am	**Gregory A. Chechkin**: Homogenization of Random Multilevel Junctions	
10:30 am – 11:00 am	**Coffee break**	
	Session I- Conference Hall	Session II- Lecture Room 4
11:00 am – 11:20 am	**S. Granet**: Two-Phase Flow Numerical Modelling: Application to a Geological Nuclear Waste Disposal	**O. Iliev**: On Numerical Upscaling for Stokes and Stokes-Brinkman Flows
11:20 am – 11:40 am	**I. Greff**: Numerical Method for Elliptic Multiscale Problems	**I. Mortazavi**: Numerical Modelling of Porous-Fluid Flows Using the Penalisation Method
11:40 am – 12:00 am	**S. Huberson**: Particle Simulation of Unsaturated Flows	**A. Muntean**: A Fast-Reaction Slow Diffusion Limit for Propagating Redox Fronts in Mineral Rocks
12:00 am – 02:00 pm	**Lunch break**	
02:00 pm – 02:30 pm	**Andro Mikelić**: Analysis of Model Equations for Stress-Enhanced Diffusion in Coal Layers	
02:30 pm – 03:00 pm	**Grigory Panasenko**: Asymptotic Partial Decomposition Strategy for Modelling of Flows in Thin Tube Structures	
03:00 pm – 03:30 pm	**Peppino Terpolillli**: Some Flow Problems in Porous Media: an Industrial Point of View	
03:30 pm – 04:00 pm	**Damien Tromeur-Dervout**: Meshfree Adaptative Aitken-Schwarz Domain Decomposition for Darcy flow	
04:00 pm – 04:30 pm	**Coffee break**	
	Session I- Conference Hall	Session II- Lecture Room 4
04:30 pm – 04:50 pm	**C. Japhet**: Discontinuous Galerkin and Nonconforming in Time Optimized Schwarz Waveform Relaxation for Coupling Heterogeneous Problems	**M-C Néel**: Time-Fractional Fick's Law for Dispersion with Memory Effects in Porous Media
04:50 pm – 05:10 pm	**M. Jurak**: A New Formulation of Immiscible Compressible Two-Phase Flow in Porous Media Via the Concept of Global Pressure	**M. Lazar**: What Feeds Oscillations in the Schrödinger Type Equations?

Wednesday 15 October

Time	Conference Hall	
09:00 am – 09:30 am	**Todd Arbogast**: Aspects of Convergence for Mixed Multiscale Finite Elements and a New Approach for their Definition	
09:30 am – 10:00 am	**Jérôome Jaffré**: Phase Exchange for Flow in Porous Media and Complementary Problems	
10:00 am – 10:30 am	**Peter Knabner**: Large General Reactive Multicomponent Transport Processes in Porous Media: Modeling, Analysis and Efficient Simulation	
10:30 am – 11:00 am	**Coffee break**	
	Session I- Conference Hall	**Session II- Lecture Room 4**
11:00 am – 11:20 am	**L. Lizaik**: Modeling and Numerical Approximation of Multi-Component Anisothermal Flows in Porous Media	**T. van Noorden**: Crystal Dissolution and Precipitation in Porous Media: Formal Homogenization and Numerical Experiments
11:20 am – 11:40 am	**M. Shuker Mahmood**: A Conservative Galerkin Characteristics Method for Contaminant Transport Problems in Porous Media	**F. A. Radu**: Upscaling of the Reaction-Advection-Diffusion Equation in Porous Media with Monod-Like Kinetics
11:40 am – 12:00 am	**R. Scheichl**: Domain Decomposition for Multiscale Elliptic PDEs	**T. Schaaf**: Joint Structural and Petrophysical History Matching of Stochastic Reservoir Models
12:00 am – 02:00 pm	**Lunch break**	
02:00 pm – 02:30 pm	**Jean E. Roberts**: Single-Phase Flow in Porous Media with Fractures: Modeling Fractures as Interfaces	
02:30 pm – 03:00 pm	**Roland Masson**: Cell Centered Finite Volume Schemes for Multiphase Porous Media Flow Problems with Applications in the Oil Industry	
03:00 pm – 03:30 pm	**Leonid Pankratov**: On the Homogenization of some Double Porosity Models with Periodic Thin Structures	
03:30 pm – 04:00 pm	**Ralph Showalter**: Flow with Dynamic Capillary Pressure Over Multiple Scales	
04:00 pm – 04:30 pm	**Coffee break**	

	Session I- Conference Hall	**Session II- Lecture Room 4**
04:30 pm – 04:50 pm	**G. Pichot**: Adaptation of a Mortar Method to Model Flow in Large-Scale Fractured Media	**L. Orgogozo**: Upscaling of Transport Processes in Porous Media with Biofilms in Equilibrium and Non-Equilibrium Conditions
04:50 pm – 05:10 pm	**F. Plouraboué**: Convergence of Generalized Volume Averaging Method on a Convection-Diffusion Problem	**S. Osmani**: Stochastic Finite Elements in a Complex System: Non Stationary Fluid Flow, Mass Transport, Heat Conduction, Vibrating
08:00 pm -	**Gala dinner**	

Thursday 16 October

Time	Conference Hall	
09:00 am – 09:30 am	**Mary Fanett Wheeler**: Multiscale Discretizations for Flow, Transport and Mechanics in Porous Media	
09:30 am – 10:00 am	**Olivier Pironneau**: Pros and Cons of the Finite Element Methods for Option Pricing	
10:00 am – 10:30 am	**Thomas F. Russell**: Stochastic Modeling of Multiphase Transport in Subsurface Porous Media: Motivation and Some Formulations	
10:30 am – 11:00 am	**Coffee break**	
	Session I- Conference Hall	**Session II- Lecture Room 4**
11:00 am – 11:20 am	**Z. Mghazli**: A Posteriori Estimators for a Model for Flow in a Porous Medium with Fractures	**M. Prodanović**: A Level Set Method for Non-Zero Contact Angle Drainage and Imbibition in Realistic Porous Media
11:20 am – 11:40 am	**C. Pierre**: Fluid/Solid Coupled Convection/Diffusion in Unidirectional Flows	**S. A. Terekhov**: Machine Learning in Reservoir Production Simulation and Forecast
11:40 am – 12:00 am	**F. Smaï**: Two Phase Partially Miscible Flow and Transport Modeling in Porous Media; Application to Gas Migration in a Nuclear Waste Repository	
12:00 am – 02:00 pm	**Lunch break**	