

**International Conference on Numerical and Mathematical Modeling of Flow and Transport in Porous Media, 29 Sep - 3 Oct, 2014, Dubrovnik, Croatia, <http://nm2porousmedia.math.hr/> contact: NM2PorousMedia@math.hr**

**Sunday September 28th**

<b>Time</b>	
06:00 pm – 09:00 pm	<b>Registration (CAAS)</b>

**IP: Invited Presentation (IS or SP) 55 mn**

**CP: Contributed Presentation 25 mn**

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**Monday September 29th**

<b>Time</b>	<b>Conference Hall</b>
07:30 am – 08:30 am	<b>Registration</b>
08:30 am – 09:00 am	<b>Conference opening</b>
<b>09:00 am – 10:00 am</b>	<b>IP 1: G. Allaire (Abstract p. 1)</b> <b>Homogenization of electrokinetic flows in porous media: the role of non-ideality</b>
10:00 am – 10:30 am	<b>CP 1: M. Gahn (Abstract p. 28)</b> Homogenization of reaction-diffusion processes in a two-component porous medium with a non-linear flux-condition on the interface
10:30 am – 11:00 am	<b>CP 2: M. Panfilov (Abstract p. 37)</b> Flow in fractal fractured-porous media: macroscopic model with super-memory, appearance on non-linearity and instability
<b>11:00 am – 11:30 am</b>	<b>Coffee break</b>
11:30 am – 12:00 am	<b>CP 3: E. Ahmed (Abstract p. 11)</b> A discrete fracture model for two-phase flow with matrix-fracture interaction
12:00 am – 12:30 am	<b>CP 4: M. Saad (Abstract p. 41)</b> Finite volume-edge finite element scheme for a two-component two-compressible flow in nonhomogeneous porous media
<b>12:30 am – 02:30 pm</b>	<b>Lunch</b>
<b>02:30 pm – 03:30 pm</b>	<b>IP 2: G. Chechkin (Abstract p. 3)</b> <b>On homogenization of liquid crystals</b>
03:30 pm – 04:00 pm	<b>CP 5: O. Lafitte (Abstract p. 31)</b> A regularized elliptic-parabolic model for the transport in porous media
04:00 pm – 04:30 pm	<b>CP 6: P. Poncet (Abstract p. 39)</b> Particle methods for transport in porous media at the pore scale
<b>04:30 pm – 05:00 pm</b>	<b>Coffee break</b>
05:00 pm – 05:30 pm	<b>CP 7: M. Discacciati (Abstract p. 25)</b> Coupling fluid and porous-media flows: modelling and numerical methods
05:30 pm – 06:00 pm	<b>CP 8: C. Zaza (Abstract p. 14)</b> A non-linear Beavers-Joseph interface condition derived from a kinetic energy balance

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**Tuesday September 30th**

<b>Time</b>	<b>Conference Hall</b>
<b>09:00 am – 10:00 am</b>	<b>SP 1: F. Arnaud (Abstract p. 9)</b> Avizo, 3D image analysis and quantification
<b>10:00 am – 10:30 am</b>	<b>Coffee break</b>
<b>10:30 am – 11:30 am</b>	<b>SP 2: F. Arnaud (Abstract p. 10)</b> Avizo, from image to simulation
11:30 am – 12:00 am	<b>CP 9: R. Gooya (Abstract p. 29)</b> Modelling of flow transport in porous media, from pore scale to non-Darcy flow
12:00 am – 12:30 am	<b>CP 10: R. Allen (Abstract p. 13)</b> Investigating the role of tortuosity in the Kozeny-Carman equation
<b>12:30 am – 02:30 pm</b>	<b>Lunch</b>
02:30 pm – 03:00 pm	<b>CP 11: D. L. Brown (Abstract p. 19)</b> Upscaling of Lattice Boltzmann simulations in heterogeneous media and related reduced order modelling techniques
03:00 pm – 03:30 pm	<b>CP 12: A. Genty (Abstract p. 16)</b> Two-phase flow relative permeability determination using Lattice Boltzmann method at the pore scale
03:30 pm – 04:00 pm	<b>CP 13: E. Werzner (Abstract p. 44)</b> Geometry modeling of open-cell foams for efficient fluid flow and heat transfer computations using modified Kelvin cells
<b>04:00 pm – 04:30 pm</b>	<b>Coffee break</b>
<b>04:00 pm – 06:00 pm</b>	<b>Poster session</b>

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Tuesday September 30th

Time	
04:00 pm – 06:00 pm	<b>Poster session</b>
04:00 pm – 06:00 pm	<b>PP1: F. Eleiwi (Abstract p. 49)</b> Complete dynamic modelling for a membrane distillation process
04:00 pm – 06:00 pm	<b>PP2: J. Grižić (Abstract p. 50)</b> Spatio-temporal distribution of water table depth, depending on hydrological and meteorological conditions
04:00 pm – 06:00 pm	<b>PP3: F. Hellman (Abstract p. 51)</b> Localized orthogonal decomposition techniques for the mixed finite element method
04:00 pm – 06:00 pm	<b>PP4: J. Minár (Abstract p. 52)</b> Determination of soil parameters using experimental data from centrifugation experiments
04:00 pm – 06:00 pm	<b>PP5: P. Stange (Abstract p. 53)</b> Impact of model approximations on soil water dynamics in drip irrigation
04:00 pm – 06:00 pm	<b>PP6: K. Tsiberkin (Abstract p. 54)</b> Natural methane hydrate instability with respect to its inhomogeneities
04:00 pm – 06:00 pm	<b>PP7: M. Vesely (Abstract p. 55)</b> Simulation of self-diffusivity of water in stochastically reconstructed porous bodies

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**Wednesday October 1st**

<b>Time</b>	<b>Conference Hall</b>
<b>09:00 am – 10:00 am</b>	<b>IP 3: Y. Efendiev (Abstract p. 5)</b> Multiscale model reduction techniques for flows in heterogeneous porous media
10:00 am – 10:30 am	<b>CP 14: P. Henning (Abstract p. 30)</b> Numerical upscaling by a localized orthogonal decomposition
10:30 am – 11:00 am	<b>CP 15: D. Capatina (Abstract p. 21)</b> NXFEM for solving non-standard transmission problems
<b>11:00 am – 11:30 am</b>	<b>Coffee break</b>
11:30 am – 12:00 am	<b>CP 16: N. Birgler (Abstract p. 18)</b> Porous media flow calculations with hexahedral mixed finite elements
12:00 am – 12:30 am	<b>CP 17: D. Cardoen (Abstract p. 22)</b> FEM modelling of membrane capacitive deionization (MCDI) for complex streams
<b>12:30 am – 02:30 pm</b>	<b>Lunch</b>
02:30 pm – 03:00 pm	<b>CP 18: S. M. Baviskar (Abstract p. 15)</b> Comparing different numerical methods for two-dimensional coupled water and solute transport in porous media
03:00 pm – 03:30 pm	<b>CP 19: A. W. Woods (Abstract p. 46)</b> On the rate of dissolution of a trapped plume of gas in an anticline
03:30 pm – 04:00 pm	<b>CP 20: N. Santatriniaina (Abstract p. 42)</b> Numerical tools to investigate the AMCs cross-contamination between wafers and FOUPs; transient analysis of mass transfer
<b>04:00 pm – 04:30 pm</b>	<b>Coffee break</b>
04:30 pm – 05:00 pm	<b>CP 21: N. K. Coptý (Abstract p. 23)</b> Modelling the fate and transport of engineered nanoparticles in porous media
05:00 pm – 05:30 pm	<b>CP 22: A. W. Woods (Abstract p. 45)</b> Buoyancy driven dispersion in a layered porous rock
06:15 pm –	<b>Gala dinner</b>

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**Thursday October 2nd**

<b>Time</b>	<b>Conference Hall</b>
<b>09:00 am – 10:00 am</b>	<b>IP 4: A. Ern (Abstract p. 6)</b> Compatible discrete operator schemes for elliptic problems on polyhedral meshes
10:00 am – 10:30 am	<b>CP 23: A. Dartois (Abstract p. 24)</b> Monte Carlo analysis of macrodispersion in 3D heterogeneous porous media
10:30 am – 11:00 am	<b>CP 24: G. Alduncin (Abstract p. 12)</b> Nonlinear transport flow through elastoviscoplastic porous media
<b>11:00 am – 11:30 am</b>	<b>Coffee break</b>
11:30 am – 12:00 am	<b>CP 25: A. Ivantsov (Abstract p. 33)</b> Effect of periodic forcing on stability of inclusion in porous media
12:00 am – 12:30 am	<b>CP 26: B. Maryshev (Abstract p. 35)</b> The effect of sorption on linear stability for the solutal Horton-Rogers-Lapwood problem
<b>12:30 am – 02:30 pm</b>	<b>Lunch</b>
02:30 pm – 03:30 pm	<b>IP 5: M. Seaid (Abstract p. 7, p. 17)</b> A mixed finite volume method for nonlinear second-order elliptic problems
03:30 pm – 04:00 pm	<b>CP 27: P. Frolkovič (Abstract p. 27)</b> Explicit and implicit numerical methods for some advection dominated problems of transport and flow in porous media
04:00 pm – 04:30 pm	<b>CP 28: S. Buitrago (Abstract p. 20)</b> An upwind finite volume method on non-orthogonal quadrilateral meshes for the convection diffusion equation in a porous medium
<b>04:30 pm – 05:00 pm</b>	<b>Coffee break</b>
05:00 pm – 05:30 pm	<b>CP 29: J. E. Mindel (Abstract p. 36)</b> Event-based numerical simulation of slightly compressible two-phase flow in heterogeneous porous media applied to CO <sub>2</sub> injection in saline aquifers
05:30 pm – 06:00 pm	<b>CP 30: S. I. Petrova (Abstract p. 38)</b> Multiscale algorithms for optimal design of microfluidic devices

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**Friday October 3rd**

<b>Time</b>	<b>Conference Hall</b>
<b>08:30 am – 09:30 am</b>	<b>IP 6: P. Bastian (Abstract p. 2)</b> High-performance computing for flows in porous media
09:30 am – 10:00 am	<b>CP 31: R. Manasipov (Abstract p. 34)</b> Comparative analysis of compositional two-phase flow modelling in heterogeneous media between the discrete event simulation method coupled to a split node formulation and classical timestep-driven approaches
10:00 am – 10:30 am	<b>CP 32: M.-H. Le (Abstract p. 32)</b> Development of an adaptive mesh refinement strategy for the Melodie software simulating flow and radionuclide transport in porous media
10:30 am – 11:00 am	<b>CP 33: T. Reiche (Abstract p. 40)</b> Migration of contaminants in fractured-porous media in the presence of colloids: effects of kinetic interactions
<b>11:00 am – 11:30 am</b>	<b>Coffee break</b>
11:30 am – 12:00 am	<b>CP 34: A. Yapparova (Abstract p. 47)</b> Reactive transport modelling of carbonate diagenesis on unstructured grids
12:00 am – 12:30 am	<b>CP 35: T. Dutta (Abstract p. 26)</b> A simulation study of reactive flow in 2-D involving dissolution and precipitation in sedimentary rocks
12:30 am – 01:00 pm	<b>CP 36: I. Sin (Abstract p. 43)</b> Study of the role of spatial heterogeneities in the vicinity of a CO <sub>2</sub> injection well
<b>01:00 pm – 02:30 pm</b>	<b>Lunch</b>