

Session Program

19-22 May 2025



InterPore2025

**17th Annual Meeting
& Conference Courses**

19 - 22 May 2025
Albuquerque, New Mexico, *USA*
Conference Courses 18 & 23 May

Photo credit: ruthdani | 13444

InterPore2025

MS07

Monday 19 May

11:25

MS07: 1.1

Session

11:25–11:40

Modeling processes in the Arctic from pore- to Darcy scale

Speaker

Malgorzata Peszynska

11:40–11:55

Rigorous Upscaling of the Navier-Stokes Equations in Heterogeneous Porous Media

Speaker

Dr Kyle Pietrzyk

11:55–12:10

A Dynamic Network Model for Thermally-Driven Reactive Transport Near Chemical Equilibrium via Spectral Decomposition

Speaker

Binan Gu

12:10–12:25

Numerical Modeling of CO₂ Solution Injection into Korean Basalt for Rapid Geological Carbon Storage through Mineralization

Speaker

Prof. Baehyun Min

12:25

13:50

MS07: 1.2

Session

13:50–14:05

Topologically-reduced models of flows in porous media with inclusions

Speaker

Beatrice Riviere

14:05–14:20

A relaxation method for nonlinear convection-diffusion processes with discontinuous terms

Speaker

Eduardo Abreu

14:20–14:35

Coupled Hyperbolic Approach to Solve Buoyant Two-Phase Flow and Transport in Heterogeneous Porous Media

Speaker

Armin Riess

14:50–15:05

Intracellular "in silico microscopes" - fully 3D spatio-temporal virus replication model simulations

15:05

Speaker

Gabriel Wittum

Tuesday 20 May

11:35

MS07: 2.2

Session

11:35–11:50

Pore-Scale Modeling and Relative Permeability Upscaling in Stress-Sensitive Fractured Porous Media

Speaker

Marcio Murad

11:50–12:05

Non-intrusive global-local method for the poroelasticity model with localized pressure effects

Speaker

Dr Hemanta Kunwar

12:05–12:20

Advancing constitutive models for expansive clays: integration of suitable effective stress and water retention frameworks

Speaker

Alessandro Parziale

12:20–12:35

Phase-Field Fracture Propagation in Thermo-Hydraulic-Mechanical Systems

Speaker

Sanghyun Lee

12:35–12:50

A Multiscale Approach to Simulate Multiphase Non-Isothermal Flow in Deformable Porous Materials

Speaker

Xiaojin Zheng

12:50–13:05

A proposal to model non-uniform mixing of polymers in flows of shear-thinning polymers in porous media during enhanced oil recovery by polymer flooding

Speaker

Prabir Daripa

13:05