



# InterPore2023

## Monday, 22 May 2023

### MS09: 1.1 (10:50 - 12:35)

time	[id] title	presenter
10:50	[17] A Lubrication Model for Wettability Characterization	Mr NOROUZISADEH, Mojtaba
11:05	[18] Dispersion of a passive scalar around a confined bubble	Dr PICCHI, Davide
11:20	[26] Deep learning aided pore scale modelling	Dr PEYMAN, Mostaghimi
11:35	[939] Thermodynamic properties of ganglia in heterogeneous porous media	WANG, Chuanxi
11:50	[56] Pore-scale simulation of hydrogen transport in porous media	Ms HASHEMI, Leila
12:05	[860] Development of a thermodynamically-based pore-scale network model to simulate fluid intermittency during two-phase flow.	ADEBIMPE, Ademola
12:20	[173] Direct numerical simulations of turbulent flows over a water saturated porous medium: How two phase pore flow forms roughness at a permeable surface	MÜLLER, Johannes

### MS09: 1.2 (13:45 - 15:45)

time	[id] title	presenter
13:45	[1067] Residual bubbles' local equilibrium after coarsening	YU, Yuehongjiang
14:00	[180] Study on Convective Drying of Porous Media – Comparison of Phase Field Simulations with Micro-model Experiments	MAIER, Lukas
14:15	[181] Starting from the bottom: Coupling a genetic algorithm and a pore network model for porous electrode optimization	Ms VAN DER HEIJDEN, Maxime
14:30	[277] Image-based pore-scale simulations of nuclear magnetic resonance response for enhanced reservoir characterization	VIANNA, Pedro
14:45	[393] Numerical modeling of evaporation-condensation in nanoporous media by SPH method	AMROFEL, Nathan
15:00	[403] Turbulent transport across the sediment-water interface: Pore-resolved direct simulations and upscaled modeling	APTE, Sourabh
15:15	[406] Stochastic Methods for the Generation of Granular Porous Media with Conditional Heterogeneity	SEERS, Thomas
15:30	[51] Gyroid structures with topology-optimised mechanical properties designed by simulations	Mrs WALLAT, Leonie

### MS09: 1.3 (17:00 - 18:00)

time	[id] title	presenter
17:00	[413] Analysis of capillary pumping during the drying of heterogeneous porous media using Lattice Boltzmann modelling	CARMELIET, Jan
17:15	[428] Pore scale study of freeze-drying using a non-isothermal pore network model and X-ray tomography image data	RODRIGUES, Simson Julian

17:30	[854] Upscaling the rheology of non-Newtonian fluid flow in porous medium – a pore-scale study	Ms AL-QENAE, Amna
17:45	[521] Pore-scale Ostwald ripening of residually trapped CO <sub>2</sub> in the presence of oil and water at immiscible and near-miscible conditions	Dr HELLAND, Johan Olav

# Tuesday, 23 May 2023

## MS09: 2.1 (09:30 - 10:30)

time	[id] title	presenter
09:30	[550] Wettability effect on flow-driven deformation using hydro-mechanically coupled pore network model	JEON, Min-Kyung
09:45	[556] Representation of Fully Three-Dimensional Interfacial Curvature in Pore-Network Models	GIUDICI, Luke
10:00	[174] A numerical study of CO <sub>2</sub> -CH <sub>4</sub> displacement in shale using Lattice Boltzmann method	Mr WU, Jian
10:15	[643] Finding the Representative Elementary Volume with Hill-Mandel condition	Dr LESUEUR, Martin

## MS09: 2.2 (12:00 - 13:00)

time	[id] title	presenter
12:00	[664] Improved Amott Experiments Capture Dynamics of Spontaneous Imbibition into Mixed-Wet Carbonate-Rock with Non-Zero Initial Brine Saturation	KAPRIELOVA, Ksenia
12:15	[713] Steady-state flow transitions in ordered porous media investigated using an artificial compressibility finite difference method	FORSLUND, Tobias
12:30	[756] Analysis of CO <sub>2</sub> trapping potential by combining morphology-based digital rock simulations and pore-scale flooding experiments	BRANDSTÄTTER, Bianca
12:45	[41] Geometrical analysis of the pore space through the A* algorithm: application to 3D micro-CT images	PANINI, Filippo

# Thursday, 25 May 2023

## MS09: 4.1 (09:15 - 10:45)

time	[id] title	presenter
09:15	[759] Meshless Lattice Boltzmann Method for pore-scale porous media flow and parameters calculation	STRZELCZYK, Dawid
09:30	[783] Volume of Fluid based study of the three phase dynamic contact line in the wetting of a thin channel.	Mr KULKARNI, Yash
09:45	[788] Discrete Element Method modelling of non-active clays	PAGANO, Arianna Gea
10:00	[796] CFD simulation of particle capture in open-cell foams: filtration efficiency and comparison with granular beds	Prof. BOCCARDO, Gianluca
10:15	[828] Pore-network modeling of gas hydrate dissociation: impact on pressure response and gas transport	THOMPSON, Karsten
10:30	[842] Pore-scale modelling and analysis of multiphase flow in gas diffusion layers	Ms LI, Min

## MS09: 4.2 (14:00 - 15:30)

time	[id] title	presenter
14:00	[850] Modelling the transport and retention of nanoparticles in a single partially-saturated pore in soil	Mr J, Jayaraj
14:15	[464] Direct numerical modelling of multiphase flow through reinforced porous media	Dr MALENICA, Luka
14:30	[875] Multi-scale pore network model for simulation of multi-phase flow in heterogeneous porous media	FOROUGH, Sajjad
14:45	[921] Multiscale forward modeling of the interplay between carbonate precipitation and porous media transport properties during geological carbon sequestration	SHEN, Tianxiao
15:00	[27] Pore-scale modeling of pore-clogging by aggregation of particles	Mr MAYA, Laurez
15:15	[806] Pore network modeling of calcination in single particles with evolving microstructure	Dr LU, Xiang