

InterPore2023

Monday, 22 May 2023

MS15: 1.2 (13:45 - 15:45)

time	[id] title	presenter
13:45	[727] Explicit Physics-Informed Neural Networks for Nonlinear Closure: The Case of Transport in Tissues	WOOD, Brian
14:00	[898] 3D Reconstruction of Porous materials using Deep Learning	Dr KAMRAVA, Serveh
14:15	[344] Physical residual neural networks for reduced order modelling of reactive flow in porous media	Dr ELSHEIKH, Ahmed H.
14:30	[400] Fast Physics Informed Surrogate Models for Fluid Flow in Porous Media: Learning Operators using DeepONets	DIAB, Waleed
14:45	[452] Physics Informed Machine Learning Methods For Production Forecast	Mr MANASIPOV, Roman
15:00	[974] Physics informed neural networks based on sequential training for CO ₂ utilization and storage in subsurface reservoir	Mr MANSOURPOUR, Kiarash
15:15	[166] Physics-informed machine learning application for heterogeneous permeability estimation in 3D sandbox experiments	YOON, Hongkyu

MS15: 1.3 (17:00 - 18:00)

time	[id] title	presenter
17:00	[134] Introducing Barlow Twins deep operator networks as a proxy for geologic carbon storage	KADEETHUM, Teeratorn
17:15	[337] Microscopic flow parameters prediction of shale oil based on deep learning	Dr ZHANG, Lei
17:30	[110] Simulating water flow and solute transport at unsaturated soils with unknown initial conditions using physics-informed neural networks trained with time-lapse geoelectrical measurements	Dr MORENO, Ziv

Tuesday, 23 May 2023

MS15: 2.1 (09:30 - 10:30)

time	[id] title	presenter
09:30	[283] Practical Tera-scale 3D Super Resolution Approaching a 1-micron Resolved 1-inch Core Plug	WANG, Ying Da
09:45	[384] Multiscale Rock Image Pore Structure Feature Identification, Quantification and Modelling using AI	PANAITESCU, Ciprian
10:00	[542] Pseudo 3D unpaired domain transfer network for digital rock domain adaptation	Mr TANG, Kunming
10:15	[668] CNN model for multi-component digital rock modeling based on CT and QEMSCAN images	Dr ZHOU, Xueqing

MS15: 2.2 (12:00 - 13:00)

time	[id] title	presenter
12:00	[211] An Improved Pore-scale Rock-typing Method using Minkowski maps for the Sensitivity of Regional Support Size	Prof. ARNS, Christoph
12:15	[804] Modeling time-dependent battery discharge rate using an autoregressive multiscale neural network	MARCATO, Agnese
12:30	[817] Imaging upscaling study for porosity and permeability characterization in carbonate rock using machine learning	YONG, Wen Pin
12:45	[841] Application of Machine Learning to Generate Multiphase Pore-Scale Images	Dr ZHU, Linqi

Wednesday, 24 May 2023

MS15: 3.1 (09:30 - 10:30)

time	[id] title	presenter
09:30	[159] Quantifying pore surface roughness of sedimentary rocks based on SEM images using artificial intelligence techniques	Dr QAJAR, Jafar
09:45	[111] Optimization of the CO ₂ injection location in heterogeneous siliciclastic reservoirs using graph theory	Dr MISHRA, Achyut
10:00	[376] Physics-Informed Deep Learning for Reactive Transport of Volatiles in Cellulose-based Porous Media	Mrs SEREBRENNIKOVA, Alexandra
10:15	[962] Accelerating continental-scale groundwater simulation with a fusion of machine learning, integrated hydrologic models and community platforms	MAXWELL, Reed

MS15: 3.2 (12:00 - 13:00)

time	[id] title	presenter
12:00	[42] Machine Learning for the Characterization of Fibrous Gas Diffusion Layers for Polymer Electrolyte Fuel Cells	Mr FRONING, Dieter
12:30	[150] Prediction of CO ₂ adsorption potential on coal using various machine learning techniques for CCUS application in coal formation	ALANAZI, Amer
12:45	[826] Dynamic Mode Decomposition to reconstruct and extrapolate hydrological time series	LIBERO, Giulia