

Mardi 17 octobre - Matin

08h15 – 09h15 – Accueil

09h15 – 09h45 – Séance d'ouverture – *Amphi Dahlias*

09h45 -10h30 – Conférence plénière – *Amphi Dahlias*

Sophie Roman, Institut des Sciences de la Terre d'Orléans

[Microfluidics for geosciences to unravel reactive transport processes in porous media](#)

10h30 – 11h00 – Pause-café

11h00 – 12h15 – Sessions en parallèle

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Modélisation numérique des écoulements en milieux poreux	Systèmes multiphases - multicomposants	Couplages mécaniques, chimiques et thermiques entre fluides et matrice dans les milieux poreux
11h00–11h25	Physics-informed neural networks for modelling groundwater flow in unconfined aquifers <i>Adhish Guli Virupaksha, ITES</i>	Non-Fickian dispersion in unsaturated porous media, influence of the Peclet number <i>Ollivier-Triquet, IFPEN</i>	Coupled numerical modeling of multiphase reactive transport and geomechanics <i>Anthony Michel, IFPEN</i>
11h25–11h50	Physics informed neural network for modelling flow in porous media: First order formulation <i>Marwan Fahs, ITES</i>	Imbibition dynamics including corner film flow in a spiral-grooved channel <i>Christian Kankolongo, I2M</i>	Meso-scale analysis of precipitation-induced damage in limestone using 4D X-ray tomographic imaging <i>Syrine Ben Elhadj Hamida, UPPA</i>
11h50–12h15	Weakly monotone finite volume scheme for parabolic and diffusion equations in strongly anisotropic porous media <i>Moha Aberrah, Moulay Ismail University</i>	Fragmentation and coalescence dynamics of non-wetting blobs during immiscible two-phase flows in porous media <i>Laurent Talon, FAST</i>	Carbon rich materials for solar evaporation: a critical perspective on performance measurement <i>Romain Fillet, Institut Jean Lamour</i>

12h15 – 14h00 – Déjeuner

Mardi 17 octobre – Après-midi

14h00 – 14h45 – Conférence plénière – *Amphi Dahlias* <https://jemp2023.sciencesconf.org/file/968074>

Adrian Bejan, Duke university, USA, Perfection is the Enemy of Evolution

14h45 – 15h30 – Pitch Poster : synthèse en 1 min

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Modélisation numérique des écoulements en milieux poreux	Stockage du CO₂	Couplages mécaniques, chimiques et thermiques entre fluides et matrice dans les milieux poreux
15h30–15h55	Sensitivity analysis for rainfall-induced landslide models <i>Rashad Abbasov, ITES</i>	Capillary trapping mechanisms for CO₂ geological storage: experimental and computational microfluidic <i>Nathan Bernard, ISTO</i>	An efficient Crouzeix-Raviart Finite Element model for coupled hydro-mechanical processes in variably saturated porous media <i>Lingai Guo</i>
15h55–16h20	A finite element solver for modeling coupled heat transfers in architected porous media up to very high temperature <i>Salih Ouchtout, IFPEN</i>	Wettability alteration of microfluidic devices using plasma and its influence on trapping mechanisms in geological reservoirs <i>Viktor Gredičak, ISTO</i>	Application of the volume averaging method to the problem of a moving granular porous medium driven by a multi-phase flow <i>Rémi Clavier, CEA</i>
16h20–16h45	Numerical study and inverse analysis of a non destructive measurement method for oxygen diffusivity in partially carbonated concrete <i>Oujidane Qacami, Lafarge</i>	Microwave Treatment of Shales for Carbon Capture and Enhanced Oil Recovery <i>Anuka Agnes, University of Nottingham</i>	Thermal performance assessment in a porous media for a vented enclosure with hot obstacle <i>Raoudha Chaabane, Monastir University</i>

16h45 – 17h15 – Pause-café

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Comportement des fluides complexes en milieux poreux	Systèmes multiphases - multicomposants	Stockage d'énergie électrochimique
17h15–17h40	Swelling and maturity effects on adsorption in organic source rocks' organic matter by molecular simulations <i>Amael Obliger, ISM</i>	Surfactant-enhanced remediation of LNAPL contaminated porous medium <i>Diana Kerimbekova, Université de Lorraine</i>	Geometric optimization of a Lithium-ion battery model <i>Richard Joly, TotalEnergies OneTech,</i>
17h40–18h05	Droplets flow in a micromodel porous network <i>Elliot Speirs, IFPEN</i>	Averaged model for mass and momentum transport in porous media with evolving heterogeneities <i>Morgan Chabanon, LEMMC</i>	Two-phase Flow Through the PTL of PEM Water Electrolyzer: MRI Experiments and Numerical Modeling Using Phase-Field Theory <i>Bilal Amoury, EMTA</i>
18h05–18h30	Bubble nucleation in liquids confined in nanopores <i>Joel Puibasset, ICMN</i>	Model of water drop infiltration in amphiphilic porous media <i>Florian Cajot, EMMAH</i>	Unlocking Insights in Battery Research with Digital Twin-driven Data Augmentation <i>Sonia Ait Hamouda, LFC</i>

Mercredi 18 octobre - Matin

09h00 - 9h45 – Conférence plénière– *Amphi Dahlias*

Philippe Coussot, Laboratoire Navier

[Features of transports in nano-porous media - Contribution of NMR and MRI](#)

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Comportement des fluides complexes en milieux poreux	Caractérisation, imagerie, génération numérique de milieux poreux	A la mémoire de M. Panfilov
9h50–10h15	Pore-scale modeling of pore-clogging by aggregation of particles <i>Laurez Maya Fogouang, ISTO</i>	Analysis of evaporation in a hydrophobic micro-model <i>Mohamed Amine Ben Amara, LESTE-ENIM</i>	Numerical simulation of reactive single phase multicomponent flows in porous media: a sequential coupling between DuMuX and PHREEQC <i>Sara Tabrizinejadas, UPPA</i>
10h15–10h40	Clogging of a 2D-porous medium: effects of main operating parameters on particle deposition and permeability reduction under geothermal conditions <i>Anne-Sophie Esneu, IFPEN</i>	Dispersion, stretching and direct visualization in 3D porous media <i>Mathieu Souzy, Université de Rennes</i>	An efficient deterministic forward modelling tool for the simulation of water flow and electrical current in fractured porous media <i>Behshad Koohbor, GeoRessources</i>

10h40 – 11h10 – Pause-café

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Comportement des fluides complexes en milieux poreux	Mécanique des milieux poreux : déformation, rupture, endommagement	A la mémoire de M. Panfilov
11h10–11h35	Viscoelastic flow in porous media -- a web of sticky strands <i>Yohan Davit, IMFT</i>	Transmissivité d'une fracture et perméabilité d'un milieu poreux en régime glissant <i>Tony Zaouter, ISEC</i>	Macroscopic dynamic capillary pressure for two-phase flow in porous media <i>Didier Lasseux, Université de Bordeaux</i>
11h35–12h00	Characterization of the first normal stress difference in diluted polymer solutions by tracking particle migration in a microfluidic channel <i>Antoine Naillon, Univ. Grenoble</i>	Induced seismicity due to fluid injection in geological reservoirs: influence of pumping strategies <i>Bérénice Vallier, ITES</i>	Computing the diphasic effective properties on nanoporous clayrock using Direct Numerical Simulation <i>Anne-Julie Tinet, Université de Lorraine</i>
12h00–12h25	Active Viscous Fingering <i>Harold Auradou, FAST</i>	Geothermal induced seismicity: Understanding the 2019 earthquake crises of Strasbourg <i>Arezou Dodangeh, ITES</i>	Large scale numerical simulation of flow in fractured porous media <i>Michel Kern, INRIA</i>

12h25 – 14h00 – Déjeuner

Mercredi 18 octobre – Après-midi

14h00 – 14h45 – Conférence plénière – *Amphi Dahlias*

Linda Luquot, Géosciences Montpellier

[Experimental study on karst formation: role of flow, chemical stress and rock heterogeneities](#)

14h45 – 16h30 – Assemblée générale du FIC, Anniversaire des 30 ans – **Didier Lasseux, président** – *Amphi Dahlias*

16h30 – 17h30 – **Posters avec pause-café** – *Hall Dahlias*

	Amphi Dahlias	Amphi Séquoia	Amphi Hortensias
Session	Modélisation numérique des écoulements en milieux poreux	Stockage du CO₂	Structures poreuses réactives
17h30–17h55	Analysis of carbon brush seals with long bristles <i>Ala Souissi, Institut Pprime</i>	CO₂ Hydrate Kinetics for CO₂ Storage in Depleted Gas Reservoirs through Microfluidic Experiments <i>Peyman Dehghani, IFPEN</i>	Reactive transport modelling in porous fractured media: contribution to the understanding of weathering processes <i>Fabrice Golfier, GeoRessources</i>
17h55–18h20	Inertial flow in porous media: effect of pressure gradient orientation <i>Yanis Bendali, EM2C</i>	Rayleigh-Taylor convection in a granular porous medium: An experimental study <i>Yves Meheust, Géosciences Rennes</i>	Development of 3D and functionalised electrodes to metal decontamination of polluted water: application to the uranium recovery <i>Florent Belnou, laboratoire d'ingénierie des surfaces et lasers</i>
18h20–18h45	NaCl Salt Crust Dynamics Diagram <i>Glad-Calin Licsandru, IMFT</i>	Microwave Assisted CO₂ Desorption from Solvent Flowing into Hollow Fiber Membrane <i>Ali Hajj, IMT Atlantique</i>	Development of macroporous geopolymer foams functionalized by a photocatalyst <i>Sara Benkhirat, Université de Perpignan</i>
18h45-19h10	Hydrodynamic dispersion in porous media enhances reaction in spherical fronts <i>Pratyaksh Karan, Géosciences Rennes</i>		Porous On-Demand Wafers for Energy, Environment and a Resilient supply chain <i>Ghadi Dakroub, CEA</i>

Jeudi 19 octobre - Matin

09h00 - 9h45 – Conférence plénière - *Amphi Dahlias*

Stefania Specchia, Politecnico di Torino

[The role of porosity in platinum-group-metal free electrocatalysts for PEM fuel cells](#)

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Comportement des fluides complexes en milieux poreux	Caractérisation, imagerie, génération numérique de milieux poreux	Mécanique des milieux poreux : déformation, rupture, endommagement
9h50–10h15	Adsorption and desorption surface dynamics of gaseous adsorbate on silicate-1 by molecular dynamics simulation <i>Jean-Marc Simon, ICB</i>	Hydrodynamics in a coarse porous layer above a sandy bed with application to contact erosion in hydraulic structures <i>Pierre Philippe, INRAE</i>	Towards a DFT approach to the Mechanical Properties of Nanoporous Materials <i>Akli Kahlal, UPPA</i>
10h15–10h40	Water absorption of particles immersed in a colloidal suspension: Application to recycled concrete <i>Emmanuel Keita, Laboratoire Navier</i>	Characterization of multiscale porosity in activated carbon by X-ray tomography and FIB-SEM <i>Othmane Darouich, LFCR</i>	Numerical study of the effect of the boundary conditions in DEM modelling on the mechanical behavior of a cemented granular media: application to biocalcified sand <i>Théo Dumas, 3SR</i>

10h40 – 11h10 – Pause-café

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Systèmes multiphasés - multicomposants	Caractérisation, imagerie, génération numérique de milieux poreux	Milieux poreux biologiques
11h10–11h35	Analysis of the surface/subsurface coupled evaporation for an energetic system <i>Thomas Doury, IMFT</i>	Open-cell foam ultra-realistic microstructure model: a new generation workflow validated through experimental data and CFD simulations <i>Enrico Agostini, IFEN</i>	Nonlocal dynamics of biofilm clogging in a porous microfluidic device <i>Gabriel Ramos, IMFT</i>
11h35–12h00	Impact of initial air and subsequent H2 gas migration in a radioactive waste repository <i>Mohamed Haythem Bahlouli, IRSN</i>	Auto-weighting multitask inverse problems for reactive flows at the pore-scale with evolving fluid-solid interface and related uncertainty quantification <i>Sarah Perez, UPPA</i>	Can we control biofilm-induced clogging in porous media? <i>Clara Toulouze, IMFT</i>
12h00–12h25	Gas migration through water-saturated bentonite: laboratory experiments and microstructural analysis <i>Mohammed Zaidi, IRSN</i>	Mechanical properties and durability of a sand cemented by microbially-induced calcite precipitation (MICP) <i>Michela La Bella, Université Grenoble Alpes</i>	Dynamics and upscaling of porous biofilms with heterogeneous rheology <i>Philippe Poncet UPPA</i>

12h25 – 14h00 – Déjeuner

Jeudi 19 octobre – Après-midi

14h00 – 14h45 – Conférence plénière : Pierre Levitz, PHysicochimie des Electrolytes et Nanosystèmes Interfaciaux

[Molecular diffusion in porous media: a multimodal approach coupling 3D imagery, X ray scattering, NMRD and numerical simulations](#) – *Amphi Dahlias*

	<i>Amphi Dahlias</i>	<i>Amphi Séquoia</i>	<i>Amphi Hortensias</i>
Session	Systèmes multiphases - multicomposants	Milieus fibreux multi-échelles, nano et micro poreux	Milieus poreux biologiques
14h50–15h15	Evaluation of electrostatic force in the vicinity of the three-phase contact region <i>Mojtaba Norouzisadeh, ISTO</i>	Probing diffusional exchange in mesoporous zeolite by NMR diffusion and relaxation methods <i>Marc Fleury, IFPEN</i>	Déplacé à 12h-12h25 Session Caractérisation
15h15–15h40	Pollutant transport in shallow aquifers <i>Christophe Bourel, LMPA Joseph Liouville</i>	Acid sites confinement in micro/mesoporous Y zeolite revealed from in situ IR monitoring of tri-tert-butylpyridine diffusion <i>Mickael Rivallan, IFPEN</i>	Insight into the mechanism of malachite green dye adsorption on porous media: Characterization, modeling, and effects of adsorption affinity <i>Fatima Zahra Falah, University of Casablanca</i>
15h40–16h05	Use of Oil-in-Water Emulsions to achieve Stable Displacement of Soil Pollution <i>Shuxin Wang, I2M</i>	Porous capsules with liquid core prepared by Pickering emulsion: Understanding of diffusional phenomena for catalyst implementation <i>Rémi Duclos, IFPEN</i>	

16h10 –16h30 – Clôture des JEMP 2023



Partenaire or



Partenaires argent



Partenaires bronze