

INTERPORE UK CHAPTER · 2026

9th Annual Conference on Porous Media

Heriot-Watt University · Edinburgh · 1-2 September 2026

DAY 1

Tuesday, 1 September 2026

PRESENTATION FORMAT:

KC lecture 30–35 + 10–15 min Q&A | Invited speakers 20 + 10 min Q&A | Contributed talks 10 + 5 min Q&A

TIME	PROGRAMME
09:30 - 10:15	Arrival & Registration <i>Location:</i> Lumsden Suite, Edinburgh Business School
10:15 - 10:30	Opening Ceremony
10:30 - 11:15	Kimberly-Clark Distinguished Lecture – <i>Online interactive lecture</i> Carbon dioxide injection into deep aquifers: a geomechanical perspective Invited speaker: Prof. Lyesse Laloui, <i>EPFL, Lausanne, Switzerland</i> Chair: Dr. Sarah Perez
11:15 - 11:40	Coffee Break <i>Location:</i> Edinburgh Business School
	Session 1 · Multiphase Phenomena Session chairs: Dr. Sarah Perez & Saeed Telvari
11:40 - 12:10	Transient and steady-state multiphase flow: new experimental approaches to imaging, fluctuation analysis, and the measurement of the Onsager coefficients Invited speaker: Dr. Marcel Moura, <i>PoreLab & University of Oslo, Norway</i>
12:10 - 12:25	The Influence of Carbonate Secondary Porosity on Hydrogen Storage Speaker: Mohammed Al Mandhari, <i>Heriot-Watt University, UK</i>
12:25 - 12:40	Frictional fingering in a gravity field Speaker: Dr. Antoine Dop, <i>PoreLab, University of Oslo, Norway</i>
12:40 - 12:55	Reduced-Order VE Modelling of Fault-Mediated CO ₂ Leakage in Stacked Reservoir Systems Speaker: Dr. Ahmadreza Shojaaee, <i>Heriot-Watt University, UK</i>
12:55 - 13:55	Lunch <i>Location:</i> Edinburgh Business School
	Session 2 · Digital & Data-Driven Modelling Session chairs: Dr. Kamaljit Singh & Dr. Farah Rabie
13:55 - 14:25	Multi-scale Dynamic Imaging of Subsurface Porous Rocks: From Pore-Scale Processes to TWh-Scale Energy Storage and Geological Waste Disposal Invited speaker: Dr. Lin Ma, <i>The University of Manchester, UK</i>

TIME	PROGRAMME
14:25 - 14:40	Bridging Sub-Wavelength Microstructures to Continuum Responses via a Multiscale Computational Framework for Acoustic Wave Propagation in Porous Media Speaker: Dr. Arun Sridhar, <i>Heriot-Watt University, UK</i>
14:40 - 14:55	Front-Aware and Locally Conservative PINNs for CO ₂ -Brine Displacement Fronts Speaker: Henglai Zhai, <i>University of Aberdeen, UK</i>
14:55 - 15:10	Screening of Large Covalent Organic Frameworks Databases for Urea Removal from Water using Molecular Simulations and Machine Learning Speaker: Dr. Maryam Zarghamidehaghani, <i>University of Sheffield, UK</i>
15:10 - 15:55	Career Development Session for ECRs – <i>Moderated panel discussion</i> Moderator: Dr. Jacqueline Mifsud
15:55 - 16:20	Coffee Break <i>Location:</i> Edinburgh Business School
	Session 3 · Uncertainty & Decision Support Session chairs: Prof. Andreas Busch & Mohammed Al Mandhari
16:20 - 16:50	From Uncertainty to Decisions: Optimising Monitoring Strategies for CO ₂ Storage Invited speaker: Dr. Michael Liem, <i>Storra Dynamics, Zurich, Switzerland</i>
16:50 - 17:05	A Compositional Vertical Equilibrium Model for CO ₂ Storage in Depleted Gas Reservoirs Speaker: Saeid Telvari, <i>Heriot-Watt University, UK</i>
17:05 - 17:20	When Well Logs Are Not Enough: Stratigraphic Feature Engineering for Predicting Permeability-Aware Clusters in Carbonates Speaker: Victor Souza, <i>Heriot-Watt University, UK; Petrobras, Brazil</i>
17:20 - 17:35	Propagating Fracture-Scale Uncertainty to Network-Scale Predictions: An AI-Assisted DFN Workflow Speaker: Dr. Sarah Perez, <i>Heriot-Watt University, UK</i>
17:45 onwards	Poster Session & Reception <i>Location:</i> Howff, The Lyell Centre

INTERPORE UK CHAPTER · 2026

9th Annual Conference on Porous Media

Heriot-Watt University · Edinburgh · 1-2 September 2026

DAY 2

Wednesday, 2 September 2026

PRESENTATION FORMAT:

KC lecture 30–35 + 10–15 min Q&A | Invited speakers 20 + 10 min Q&A | Contributed talks 10 + 5 min Q&A

TIME	PROGRAMME
08:30 - 09:00	Arrival & Registration <i>Location:</i> Lumsden Suite, Edinburgh Business School
	Session 4 · Engineering & Manufacturing Session chairs: Prof. Florian Doster & Dr. Hariharan Ramachandran
09:00 - 09:30	The critical role of multiscale porous materials in the performance of electrochemical devices Invited speaker: Dr. Daniel Niblett, <i>Newcastle University, UK</i>
09:30 - 09:45	Flow in packed columns of microplastic fibre-granular particle mixtures Speaker: Dr. Yukie Tanino, <i>University of Aberdeen, UK</i>
09:45 - 10:00	Do Physics-based Constraints Matter? Evaluating Neural Network-based Surrogates for Constitutive Modelling Speaker: Dr. Farah Rabie, <i>Heriot-Watt University, UK</i>
10:00 - 10:15	Quantification of steady state evaporative heat flux of natural porous media using an optical method Speaker: Pahan Wijayabandara, <i>University of East Anglia, UK</i>
10:15 - 10:35	Coffee Break <i>Location:</i> Edinburgh Business School
	Session 5 · Energy Transition & GeoEnergy Session chairs: Dr. Zhenkai (Josh) Bo & Dr. Zaid Jangda
10:35 - 11:05	Hydrogen farming in subsurface Invited speaker: Dr. Aliakbar Hassanpouryouzband, <i>The University of Edinburgh, UK</i>
11:05 - 11:20	Exsolution, Evolution, and Hysteresis of CO ₂ Nanobubbles in Water-Saturated Sandstone Speaker: Prof. Andreas Busch, <i>Heriot-Watt University, UK</i>
11:20 - 11:35	Operational Strategies to Reduce the Impact of Mixing in Underground Hydrogen Storage Speaker: Sam Marchbank, <i>University of Edinburgh, UK</i>

TIME	PROGRAMME
11:35 - 11:50	Neuro-Algebraic Digital Twin for Critical State Analysis of Mine-Water Geothermal Systems Speaker: Dr. Oleksandr Letychevskyi, <i>Heriot-Watt University, UK</i>
11:50 - 12:05	Graph Neural Network Surrogates for Heat Transport in Fractured Geothermal Reservoirs Speaker: Reza Najafi Silab, <i>Heriot-Watt University, UK</i>
12:05 - 13:05	Lunch <i>Location:</i> Edinburgh Business School
	Session 6 · Biological & Soft Systems Session chairs: Dr. Jacqueline Mifsud & Reza Najafi-Silab
13:05 - 13:35	Capillary compression of a soft sponge Invited speaker: Prof. Christopher W. MacMinn, <i>University of Oxford, UK</i>
13:35 - 13:50	Impact of Grain Size on Bacterial Attachment–Detachment Dynamics in Packed Columns of Uniform Spheres Speaker: Dr. Hamed Movahedi, <i>University of Aberdeen, UK</i>
13:50 - 14:05	Fluid-structure Interactions in Central Conducting Lymphatic Anomaly Speaker: Jessica Johnson, <i>University of Oxford, UK; National Institutes of Health</i>
14:05 - 14:20	Developing a Novel Dual-Contrast Workflow for the Non-Destructive Pore-Scale Imaging of Biofilms in Porous Media using X-ray μ CT Speaker: CJ Jones, <i>Heriot-Watt University, UK</i>
14:20 - 14:30	Short Comfort Break
	Session 7 · Reactive & Environmental Systems Session chairs: Dr. Alexis Cartwright-Taylor & CJ Jones
14:30 - 15:00	Radionuclide transport and retention in environmental systems: an experimental and radiochemistry perspective Invited speaker: Prof. Katherine Morris, <i>The University of Manchester, UK</i>
15:00 - 15:15	Imaging Fracture Dominated Flow Pathways in Low Permeability Mine Water Lithologies Speaker: Dr. Elli-Maria (Elma) Charalampidou, <i>Heriot-Watt University, UK</i>
15:15 - 15:30	Novel Sorbents for Remediation of Crude Oil and Refined Product Spills in Aquatic Systems Speaker: Alamin Khamis, <i>University of Strathclyde, UK</i>
15:30 - 15:45	Applied Smouldering systems for carbon-negative waste treatment Speaker: Dr. Tarek Rashwan, <i>University of Nottingham, UK</i>

TIME	PROGRAMME
15:45 - 16:00	Closing Ceremony
16:00 - 16:30	Optional Laboratory Tour