InterPore2023

Abstract submission now open!

HERIOT WATT UNIVERSITY

15th Annual International Conference on Porous Media

22 - 25 May 2023
Edinburgh, Scotland

***Satellite Short Courses** 21 & 26 May*

Interdisciplinary Porous Media Topics

The **scientific program** ranges from **pore-scale modeling**, **pore-scale imaging**, to **experimental and numerical methods on larger scales**, including **sensitivity and uncertainty analysis**. Stay abreast of the latest porous media research on trending topics such as **energy storage**, **biotechnics** and **nature-based agriculture**. Presentations are structured across **24 minisymposia** on a wide variety of porous media processes in highly diverse applications, including: **transport phenomena**, **soil mechanics**, **fuel cells**, **filters**, **foams**, **membranes and more.**
Find collaborative **industrial and application-oriented institutional partners.**

Plenary Speakers

Adrian Bejan - *Duke University*
Vascular Design: Freedom, Evolution, Hierarchy

Christopher Jackson - *Jacobs Engineering Group Inc.*
Race, Racism, and Barriers to the Participation of Black People in Geological Sciences How bad is it? Should we do something about it? What can we do about it?

J. Carlos Santamarina - *KAUST*
Multi-Physics Repetitive Loads

Nathalie Tufenkji - *McGill University*
Porous Graphene Oxide Macrostructures for Water Treatment Applications

Onno van Kessel - *Shell*
Energy transition and porous media; an industrial megaproject perspective

Eugene Vorobiev - *Université de Technologie de Compiègne*
Electroporation of cellular membranes for the enhancement of mass transfer in biological media: mechanism and technological applications

Invited Speakers

Shervin Bagheri - *KTH Royal Institute of Technology*
Stability and functionality of immobilised liquid-liquid interfaces in periodic structured media

Bruce Balcom - *University of New Brunswick*
Magnetic Resonance Measurements of Fluids in Shale

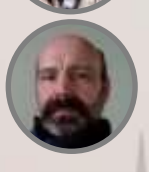
Rouhi Farajzadeh - *TU Delft*
Thermodynamic efficiency/limit of subsurface energy production/ storage systems

Lidietta Giorno - *Institute on Membrane Technology (CNR-ITM)*
Porous biohybrid multifunctional membranes for biosensors and bioremediation

Behnam Jafarpour - *University of Southern California*
Deep Learning for Parameterization and Calibration of Subsurface Flow Models

Raffaella Ocone - *Heriot-Watt University*
The Rheology of Granular Media: from Engineering to Geological Applications

Adriana Paluszny - *Imperial College London*
Finite element modelling of the growth and flow properties of multiple-scale three-dimensional fracture networks



Gerard Vignoles - *University of Bordeaux*
How the Chemical Vapor Infiltration process can be optimized for the production of advanced composite and porous ceramics

Program Committee

Chair: Patrick Jenny - *ETH Zürich*
Vice-Chair: Sridhar Ranganathan - *Kimberly-Clark Corporation*

Local Organizing Committee

School of Energy, Geoscience, Infrastructure and Society
Heriot Watt University
Co-Chairs: Andreas Busch, Florian Doster, Kamaljit Singh
Members: Julien Maes, Hannah Menke
Student Members: Nick Harpers, Laith Jaghman, Zaid Jangda, Nengi Karibi-Botoye, Ekaterina Lgotina, Ming Wen

www.interpore.org/2023

Special Focus on Energy Transition

Publishing Opportunities

Networking & Student Events

Exhibition Hall

Workshops

Student Poster Awards

Conference Grants

Online Access

Special Focus on Energy Transition

Confronted with the biggest and most difficult global challenge to mankind, efforts are intensifying to move **away from fossil-based energy sources to zero-carbon energies.** This transition to renewable energy resources and lowering of carbon dioxide emission to the atmosphere must happen at an unprecedented pace in order to have the desired effect. In this regard, **urgent research in some major areas and technologies is needed**. Many of these research questions are **related to porous media phenomena.**

Highlights will include:

- **Plenary lecture by Dr. Onno van Kessel**
  General Manager CCS (Development & Subsurface) at Shell
- **Panel discussion on current urgent research needs** in various energy transition technologies and methodologies
- **Oral presentations and posters on:**
  - *Hydrogen Production, Storage, and Consumption*
  - *Carbon Capture and Storage (CCS)*
  - *Electrochemcial Energy Conversion Devices*
  - *Geothermal Energy*

Diversity, Equality & Inclusiveness (DEI) Event

Christopher Jackson, *geoscientist at the engineering consultancy Jacobs and Visiting Professor in Basin Analysis at Imperial College*, will provide a **plenary lecture** entitled, *"Race, Racism, and Barriers to the Participation of Black People in the Geological Sciences: How bad is it? Should we do something about it? What can we do about it?"* followed by a **lunch-time workshop**. This event is organized by the InterPore DEI Committee and will be open to all conference participants. Lunch will be provided.

Networking & Student Events

In addition to the technical portions of the conference, you will find many opportunities for personal and professional development.

The **Local Organizing Committee (LOC)** is organizing a number of fun events, which include an **Arthur's Seat Fun Run**, **Distillery tour, traditional Scottish dancing, and a bagpipe concert.**

In conjunction with The **Student Affairs Committee (SAC)**, the LOC is also preparing several **events and activities for students** to include: the annual **SAC Career event**; **workshops** on the peer review process, CV development for academia and industry, public presentation skills, and successful grant writing; **Indoor climbing**; a **museum and national gallery tour**; and a **team-building activity/game** at a pub.

Conference Location

InterPore2023 will be held at the **Edinburgh International Conference Centre (EICC)** in the heart of Edinburgh, Scotland. Home to **three UNESCO Heritage Sites**, **four Universities** and named the UK's "**Greenest City**", Edinburgh is full of history, culture and places waiting to be explored. The EICC is **easily accessible by public transportation** and is only 10km away from Edinburgh International Airport, which offers over **300 flights a day to more than 130 UK and worldwide destinations.**

In order to accommodate those who, for various reasons, may be unable to join in the physical meeting, InterPore2023 will offer the **option to participate online**. Please visit our website for more details.