12th UK Geothermal Symposium

11-12 November

Burlington House and Zoom

Provisional Programme

Workshop - Modelling geothermal systems with FEFLOW

1pm-4pm, 10 November

This in person instructor-lead, hands-on workshop provides you with comprehensive training in geothermal modelling using FEFLOW. The program focuses on the modelling of shallow (near-surface) geothermal reservoirs.

Please note separate registration is required for the Workshop. This is an in person attendance only and subject to availability.
https://www.geolsoc.org.uk/events/workshop-12th-geothermal-symposium/

Day One – 11 November

08.30	**Registration**
09:00	**Welcome**
09.05	**KEYNOTE: TBC** **Anne Murrell, *Geothermal UK***
	Session One: Policy, Governance & Tools
09.20	**UK Geothermal Energy Review and Cost Estimations Report** Jordan Weddepohl, *Arup*
09.35	**The UK Geothermal Platform** Alison Monaghan, *BGS*
09:50	**Climbing the heat ladder: a strategic approach for urban geothermal governance** David Barns, *University of Leeds*
10.05	**Environmental and social impacts from co-location of net zero subsurface activities** Sian Loveless, *Environment Agency*
10.20	**BREAK – Poster Session**
	Session Two: Thermal Emergy Storage
11.00	**Investigating mixed circuit borehole heat exchangers for thermal energy storage and extraction** Christopher Brown, *BGS*
11.15	**Subsurface monitoring of thermal plumes at the UK Geoenergy Observatory in Cheshire** Mike Spence, *BGS*
11.30	**Integrating Fibre-Optic Monitoring and 3D Numerical Modelling for Thermal Response Tests in the Sherwood Sandstone Group, UKGEOS Cheshire** Jafar Al Jawad, *BGS*

11:45	**Lessons from battery energy storage: how regulation and investment incentive learnings from BESS can help scale geothermal** Nicolette Salazar, *National Grid*
12:00	**Geothermal resource modelling in NE England** Zhenni Sun, *University of Manchester*
12.15	**LUNCH**
	Session Three
13.30	**KEYNOTE: TBC** Dave Banks, *University of Glasgow*
13:45	**Quick Fire Talks**
GEMINI: Geothermal Energy Momentum on the Island of Ireland Michael MacKenzie, *BGS*	
Characteristics of Devonian Limestones in Plymouth, UK, and the prospects for geothermal energy Nicholas Harper, *University of Exeter*	
Expanding the UK's Geothermal Future: Power Generation from Low-Temperature Resources with Micro-ORC Technology Eren Gunuc, *London Geothermal Ltd*	
A simple probabilistic approach to assess the potential capacity of open-loop Ground Source Heating and Cooling and Aquifer Thermal Energy Storage systems Meissam Bahliali, *Imperial College London*	
Facilitating research and operational schemes to realise the geothermal potential of abandoned coal interests Joanne Eynon & Helen Day, *Mining Remediation Authority*	
	Session Three: Minewater Geothermal
14:20	**Techno-economic feasibility of using abandoned flooded mines for storage and transport of waste heat** Leah Victoria Swan, *TownRock Energy*
14:35	**Computational Analysis of the Thermochemical Impacts of Minewater Thermal Energy Storage on Scotland's Midland Valley Coal Mines** Samuel Graham, *University of Exeter*
14:50	**Emerging research, collaboration and development of mine water heat at the Mining Remediation Authority** Rebecca Chambers, *Mining Remediation Authority*
15:05	**BREAK**
	Session Four: Deep Geothermal & Lithium
15.45	**An update on the development and commissioning of the United Downs Geothermal Power Plant, Cornwall** Thomas Olver, *Geothermal Engineering Limited*
16.00	**Geothermal fluids of the Carnmenellis Granite, Cornwall, UK** Chris Rochelle, *BGS*
16.15	**Photogrammetry-Based DFN Characterisation to Support Geothermal Lithium Exploration in Cornwall** Fiona McLean, *WSP UK*
16.30	**Selective Extraction of Lithium from Native Geothermal Brines Using Lithium-ion Sieves** Misagh Ghobadi, *University of Exeter*

16:45	**Reservoir Independent Deep Geothermal Technology for Heating** Mikey Van Mourik, *TownRock Energy*
17.00	**Closing Remarks**
17.05-18.05	**Drinks Reception**

Day Two – 12 November	
08.30	**Registration**
08.50	**Welcome**
09.00	**KEYNOTE: Supercharging UK Geothermal: Year One of the National Geothermal Centre TBC**
	Session Five: Ireland
09.15	**Standing column well technologies in Northern Ireland, Part 1: Background, opportunities, barriers and forward potential** Simon Todd, *Causeway Geothermal (NI) Ltd*
09.30	**Standing column well technologies in Northern Ireland, Part 2: Borehole test design, execution, analysis and results** Huw Williams, *Agua Enodo*
09.45	**GeoEnergy NI – Results, Lessons Learned, and Forward Look** Sharon Clements, *Department for the Economy*
10.00	**Producing Subsurface Temperature Models from Joint Geophysical-Petrological Inversion** Emma Chambers, *Dublin Institute for Advanced Studies*
10.15	**BREAK – Poster Session**
	Session Six: Novel or O&G techniques for geothermal
11.00	**THERMOCAL – International thermogeological characterisation of Caledonian rocks** Sean Watson, *Glasgow University*
11.15	**Geothermal energy prospecting in radiothermal granites in the Cairngorms, Scotland, using an integrated magnetotelluric and petrophysical approach** Scott Innes Campbell, *Heriot Watt University*
11.30	**High-resolution geothermal exploration of the Muara Laboh geothermal system using Nodal Ambient Noise Tomography (NANT)** Michail Henry, *INVERT Sàrl*
11.45	**A multi-perspective assessment of shallow geothermal energy potential for the city of Cambridge, UK** Nikolas Makasis, *University of Surrey*
12.15	**Reducing Subsurface Uncertainty in the Early Carboniferous Limestones: An Integrated Geophysical Approach to Geothermal Reservoir Characterisation** Mohamed Gouiza, *Imperial College London*
12.30	**LUNCH**
13.45	**KEYNOTE: TBC** **Helen Robinson, *Aquarius Resources***

14.00	**PANEL DICUSSION: From Margins to Mainstream: Growing Geothermal's Share of UK Energy** **TBC**
	Session Seven: Novel or O&G techniques for geothermal
15.00	**The importance of pilot well programmes in geothermal projects: insights from Geothermal Campus Leeds** Arka Dyuti Sarkar, *University of Leeds*
15.15	**A pragmatic method for seismic hazard analysis for induced seismicity associated with geothermal developments in the case of limited a priori data** Mark Ireland, *Newcastle University*
15.30	**CO2 Fracturing in Preconditioned Reservoir Rocks: Maximizing Enhanced Geothermal System Extraction Potential While Minimizing Induced Seismicity** Lie Kong, *University of Manchester*
15.45	**BREAK**
	Session Eight: Resource Characteriastion
16.15	**Regional Mapping of Permo-Triassic aquifers in the Cheshire Basin, for direct use geothermal energy** David Johnstone, *University of Manchester*
16.30	**Hydrostratigraphy from thermal response: DTS-derived flow estimates for open-loop system design** Joseph Kelly, University of Leeds
16.45	**Multiparametric geophysical assessment of geothermal resources in the Dodecanese islands, Greece** Julien Sfalcin, Invert
17.00	**Influence of Temperature and Heating Rate on Rock Thermophysical Behavior for Geothermal Applications** Fatemeh Tavanaei Sereshgi, *McGill University*
17.15	**GEOTHERMAL INM MINECRAFT _ REACHING FUTURE GENERATIOSNS** Simon Kendall, *EPDL*
17.30	**Closing Remarks**
17.45	**End of day two**

Posters – Day 1
Heterogeneity in public attitudes and preferences for the deployment of aquifer thermal energy storage Liu Ting, *Imperial College London*
Mine Water Heat Opportunity Mapping across Great Britain Dan Mallin Martin, *Mining Remediation Authority*
Rapid simulation of Aquifer Thermal Energy Storage (ATES) using Machine Learning Nok Hei Fung, *Imperial College London*
GeoGrid Leeds – modelling shallow aquifer thermal energy storage for the University of Leeds campus and upscaling storage at a national level Allegra Giblin Torlucci, *University of Leeds*
Using groundwater temperature data to reveal subsurface thermal and hydraulic processes Ashley Patton, *British Geological Survey/Cardiff University*

Optimising Urban Shallow Geothermal Systems Through Near-Surface Geophysical Characterisation Douglas Lansley, *The University of Manchester / Zetica*
Assessment of common hypotheses adopted in borehole sizing for Ground-Source Heat Pump (GSHP) systems Fabien Bez, *Centre Géosciences Mines Paris*
Understanding the feasibility of Aquifer Thermal Energy Storage using numerical simulations Carlos Andres Rivera Villarreyes, *DHI*
An update on the development and commissioning of the United Downs Geothermal Power Plant, Cornwall Thomas Olver, *Geothermal Engineering Ltd*
Progress in assessing the feasibility for the installation of high temperature, mine thermal energy storage technologies in the Great Consolidated Mines, Cornwall Thomas Olver, *Geothermal Engineering Ltd*

Posters - Day 2
Deep Geothermal in Practice: Lessons Learned from German Flagship Projects for UK Stakeholders Stephanie Ostermaier, *Roedl & Partner*
Investigating the Potential of Geothermal Energy as a Sustainable Heat Source for Enhancing Waste Oil Properties in the Recycling Process of Waste Glass Kennedy Moranga Anyona, *University of Pisa*
The Role of Condensate Drainports Chemistry in steam Cleaning in Olkaria IAU Geothermal Power plant Melissa Nkapiani, *Kenya Electricity Generating Company LTD*
Closed loop geothermal well solution drilled and completed in basement rocks Kim Gunn Maver, *Green Therma*
Micromechanics of Fluid-Induced Fault Reactivation From 4D X-Ray Microtomography Birhanmeskel Haddis Woldemichael, *Heriot-Watt University*
Next-generation geothermal technologies: unlocking Europe's untapped energy potential Kate Adie, *Wood Mackenzie*
De-risking Geothermal Heat Extraction from Tight Hot Sedimentary Aquifers (GEOGUARD) Nathaniel Forbes Inskip, *Heriot-Watt University*
2D and 3D Geothermal Modelling of the Cheshire Basin: Implications for Geothermal Energy Exploration Harry Graveling, *Keele University*
Numerical investigation of onset of convection in heterogeneous porous media: implication for Geothermal reservoirs Aman Sharma, *IIT (ISM) Dhanbad*
Unlocking the geothermal energy potential of old sedimentary systems: Linking reservoir quality, geomechanics and flow Skye T. Tisdell, *Heriot-Watt University*