



10th UK Geothermal Energy Symposium

20th-22nd November 2023

The Geological Society, Burlington House, Piccadilly, London and Online

Provisional Programme

Day One	
08.30	Registration
09.00	Conference Introduction and Welcome
Session One: Keynote Session	
09.10	IN PERSON KEYNOTE TITLE: Geothermal: a rising champion for the just Energy Transition <i>Marit Brommer, International Geothermal Association</i>
09.30	IN PERSON KEYNOTE TITLE: Dig Deep: Opportunities On The Way To Net Zero <i>Dr Kieran Mullan MP</i>
09.40	IN PERSON KEYNOTE TITLE Unearthing the heat beneath our feet in Northern Ireland: The GeoEnergy NI project <i>Michael MacKenzie, Department for the Economy</i>
10.00	Keynote Q&A Session
10.15	BREAK
Session Two: Geothermal Finance and Hot Sedimentary Aquifers	
11.00	Procuring Renewable Energy Directly: The Customer Opportunity <i>Michael Abbott, Sustainable Energy First</i>
11.15	UK Planning and Community Engagement for Deep Geothermal development <i>Hazel Starmer-Jones, GEL</i>
11.30	The case for deep geothermal energy — unlocking investment at scale in the UK <i>Corinna Abesser, BGS</i>
11.45	Meeting heating demand from deep geothermal aquifers in the UK's sedimentary basins <i>Mark Ireland, Newcastle University</i>
12.00	LUNCH
Session Three: Hot Sedimentary Aquifers	
13.30	De-risking Geothermal Heat in the UK: Lessons Learned from The Netherlands <i>Floris Veeger, Sproule</i>
13.45	Temporal and spatial variation in depositional environment and the effect on reservoir quality in the Sherwood Sandstone Group, Northern Ireland <i>Rioko Moscardini, University College Dublin</i>
14.00	Geothermal heat production from Mississippian limestone (UK) - what is the role of hypogenic voids? <i>Cathy Hollis, University of Manchester</i>

14.15 Virtual	Reservoir Connectivity Concerns in the Dogger Aquifer? An Assessment through a Geothermal Doublet Daniel Otoo, <i>Université Paris-Saclay</i>
14.30	Ranking Methodology to Prioritise and Communicate Deep Geothermal Opportunities Jordan Weddenpohl, <i>Arup</i>
14.45	BREAK
	Session Four: Geothermal from Granites
15.15	Effects of natural geochemical alteration on frictional properties around faults in a deep, granitic, geothermal system in Cornwall: Direct shear experiments and microstructural observations Nick Harpers, <i>Heriot-Watt University</i>
15.30	Current Status of The Eden Geothermal Project (November 2023) Roy Baria, <i>EGS Energy Ltd</i>
15.45	Eden Geothermal's heat demonstration at the Eden Project, Cornwall, UK. A novel 3850m coaxial completion in granite. First results: learning to drive the system. Augusta Grand, <i>Eden Geothermal Ltd</i>
16.00	Imaging deep geothermal reservoirs with magnetotellurics – A pilot study around the Eden Geothermal drill site, Cornwall Juliane Huebert, <i>BGS</i>
16.15	National Geothermal Centre, UK Jon Gluyas, <i>University of Durham</i>
16.30	End of Day One
16.30- 17.30	Drinks Reception

Day Two	
08.30	Registration
09.00	Introduction to Day Two
	Session Five: Shallow Geothermal
09.10	Geothermal Energy: Status Quo or “Deeper and Down”? David Banks, <i>Holymoor Consultancy Ltd</i>
09.25	Reflections on a decade of shallow geothermal research in Cardiff, UK David Boon, <i>BGS</i>
09.40	Aquifer Thermal Energy Storage in the UK: Current Status and Future Prospects Matthew Jackson, <i>Imperial College London</i>
09.55	Celsius Energy: a digital-native geoenergy solution to decarbonize heating and cooling Giovanni Sosio, <i>Celsius Energy</i>
10.10	BREAK
	Session Six: Shallow Geothermal
11.00	Impact of Chalk Aquifer Heterogeneity on Low Temperature Aquifer Thermal Energy Storage (LT-ATES) System Performance: A Case Study in London, UK Hayley Firth, <i>Imperial College London</i>

11.15	New national infrastructure for the in- situ evaluation of aquifer thermal transport and storage: Introducing the UK Geoenergy Observatory in Cheshire, UK Michael Spence, <i>BGS</i>
11.30	Estimating the capacity of shallow aquifer thermal storage in the UK- A National screening approach Richard Haslam, <i>BGS</i>
11.45	Deep Geothermal Heat Pumps: cost competitive retrofit of fossil fuel heat in the built environment Simon Todd, <i>Causeway Energies</i>
12.00	LUNCH
	Session Seven: Environmental of Shallow Geothermal and Mine Water Geothermal
13.30	How sensitive is the environment to temperature changes from ground source heating and cooling systems? Sian Loveless, <i>The Environment Agency</i>
13.45	Towards a Regional and Local Hydrogeological Understanding of the Midlothian Coalfield: Update on learnings from the Galleries to Calories GeoBattery Pilot Study David Townsend, <i>Townrock Energy</i>
14.00	Testing, monitoring and quantifying mine water geothermal using the UK Geoenergy Observatory in Glasgow, UK Alison Monaghan, <i>BGS</i>
14.15	Towards a fuller understanding of pumping test data from mine water aquifers: Learnings from UKGEOS Glasgow Samuel Graham, <i>University of Edinburgh</i>
14.30	BREAK
	Session Eight: Mine Water Geothermal
15.00	Geothermal from Metal Mines in Cornwall—a case study looking at the potential for mine waterheating from historic mines Geevor, Levant and Botallack Lucy Cotton, <i>Geoscience Ltd.</i>
15.15	Developing the Gateshead Mine Heat Scheme Charlotte Adams, <i>The Coal Authority</i>
15.30	The Mine Water Geothermal Resource Atlas for Scotland (MiRAS) David Walls, <i>University of Strathclyde</i>
15.45	Net Zero thanks to Coal? Exploring the Potential of Mine Water Geothermal from an Abandoned Coal Mine in Kent Miriam Bleakley, <i>University of Durham</i>
16.00	End of Day Two

Day Three

08.30	Registration
09.00	Introduction to Day Three
	Session Nine: Faults, Fractures and Fluids
09.10	IN PERSON KEYNOTE TITLE Geothermal development in Chile: a long history of some lights and many shadows Diego Morata, <i>Universidad de Chile</i>

09.30	Transport properties of fault related geothermal systems in Cornwall: An experimental approach Nathaniel Forbes-Inskip, <i>Heriott Watt University</i>
09.45	A quantitative assessment of the risks of induced seismicity and potential for fluid flow in the fractured Carboniferous Limestone of northwest England with implications for geothermal energy David Healy, <i>University of Aberdeen</i>
10.00	Fluid flow in fractured geothermal systems: an example from the Nevados de Chillan Volcanic Complex (Southern Volcanic Zone, Chile) Gloria Arancibia, <i>Pontificia Universidad Católica de Chile</i>
10.15	BREAK
	Session Ten: Faults, Fractures and Fluids, Lithium, and Drilling
11.00	Using Electron Backscatter Diffraction to discover geothermal reservoir scaling controls David McNamara, <i>University of Liverpool</i>
11.15	Cornish Lithium: Exploration for lithium-enriched geothermal waters in Southwest England Alexander Hudson, <i>Cornish Lithium</i>
11.30	Exploring the deep fractured reservoirs for extracting heat and lithium from geothermal brine: a case study of Les Sources Jeanne Vidal, <i>Lithium de France</i>
11.45	OptiDrill – Back to the future Kevin J Mallin, <i>Geolom Ltd</i>
12.00	LUNCH
	Session Eleven: Drilling, Modelling of Geothermal Systems
13.30	Improved data quality fidelity and analytics at surface and downhole to deliver improved wellbore understanding in geothermal applications and technology development Stephen Pink, <i>eVolve & WDP</i>
13.45	Low-Grade Heat – The UK's Geothermal Sweet Spot Iain Hutchinson, <i>Merlin Energy Ltd</i>
14.00	Understanding the Impact of Paleoclimate Corrections on the Cheshire Basin with Application to Deep Borehole Heat Exchangers Sean Watson, <i>University of Edinburgh</i>
14.15	Uncertainty quantification of conceptual open and closed loop geothermal developments in Newcastle and Gateshead Tom Charlton, <i>Newcastle University</i>
14.30	BREAK
	Session Twelve: Modelling of Geothermal Systems, and Overviews of UK Geothermal
15.00	The optimisation and sensitivity of coaxial heat exchangers Ben Adams, <i>Camborne School of Mines</i>
15.15	Repurposing a Geothermal Exploration Well as a Deep Borehole Heat Exchanger: Updates from the NetZero GeoRDIE Project Christopher Brown, <i>University of Glasgow</i>
15.30	Conference Summary and Thanks
15.45	End of Conference

Posters
<p>UK geothermal data, maps, products and tools: plans and your views Alison Monaghan, <i>BGS</i></p>
<p>Improvement of Thermal Efficiency of Energy Piles by a Novel Approach Using Integrated Numerical, Experimental and Digital Tools Fatemeh Ardakani, <i>University of Birmingham</i></p>
<p>Quantifying the Impacts of Faults and Dykes on Fluid Flow in Northern Ireland Permo-Triassic Reservoirs and Aquifers Mark Cooper, <i>BGS</i></p>
<p>tanuki™/PyFDEM: a Toolkit for the Permeability Enhancement Optimisation of Geothermal Wells Ado Farsi, <i>Imperial College London</i></p>
<p>Understanding Lithosphere-Asthenosphere Dynamics for Global Geothermal Prospectivity Mapping Megan Holdt, <i>University of Cambridge</i></p>
<p>The Lower Carboniferous (Mississippian) Limestone in the UK: potential risks and opportunities to geothermal exploration Cathy Hollis, <i>University Manchester</i></p>
<p>Lithium extraction from geothermal waters in Southwest England William Irani, <i>Cornish Lithium</i></p>
<p>Unlocking Geothermal Energy: Recent Developments in Puga Valley and the Global Call for Advocacy Sanskriti Jha</p>
<p>The Geology of Fractures in the Subsurface - applications to Geothermal and CCS Melissa Johansson, <i>Geode</i></p>
<p>The United Downs project: geothermal electricity, heat, and critical raw materials Ryan Law & Hazel Starmer-Jones, <i>GEL</i></p>
<p>Repurposing Disused Coal Mines for Geothermal Heat Networks: Towards an Environmental and Social Sustainable Solution Jingyi Li, <i>University of Manchester</i></p>
<p>Regulating the environmental impacts of geothermal energy Anna McClean, <i>Newcastle University</i></p>
<p>Scope of Subsurface Geological Studies for Geothermal Investigation in Shyok-Nubra Valley, Ladakh Himalaya Parashar Mishra, <i>Geological Survey of India</i></p>
<p>Scalability and geomechanical influence on structurally-controlled fluid flow in Leeds, West Yorkshire Kathryn Page, <i>University of Leeds</i></p>
<p>Geothermal Campus Leeds – shallow geothermal direct heat use in an urban environment Arka Dyuti Sarkar, <i>University of Leeds</i></p>
<p>Coal Authority Mine Water Heat data Fiona Todd, <i>The Coal Authority</i></p>
<p>Integrated reservoir assessment of Middle Buntsandstein sandstones in West European Basins: Insights into diagenetic processes Husnain Yousaf, <i>Katholieke Universiteit Leuven</i></p>



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