Hybrid Conference

21 - 22 September 2026

What Makes a Geoscience Model Useful?

CONFERENCE PROGRAMME

The Geological Society

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Monday 21 September		
0920 - 1000	Registration opens, tea & coffee	
1000 - 1010	Welcome address	
Session one: Purpose value and predictive power of models | Chaired by Charlotte Martin & Peter Burgess		
1010 - 1030	Back-to-Basics Understanding Supporting Effective Models & Decisions	Lee Watts, *Shell*
1030 - 1050	More than a Database: Insightful Ground Models for Offshore Wind Farms	Sean Pearce, *East Point Geo (OWC)*
1050 - 1120	Tea & coffee break	
1120 - 1140	Seismic modelling of dolomite bodies in the subsurface: making a geological model useful	Cathy Hollis, *University of Manchester*
1140 - 1200	How useful are numerical models of volcanic and igneous plumbing systems (VIPS)?	Catherine Annen, *Institute of Geophysics of the Czech Academy of Sciences* (Virtual)
1200 - 1245	Discussion and debate	
1245 - 1345	Lunch and posters	
Session two: Simplicity, complexity and fitness for purpose | Chaired by Janine Kavanagh & Georg Warrlich		
1345 - 1405	Simple Rules, Complex Outcomes: Modelling as a Tool for Discovery in Geoscience	Thomas Poulet, *CSIRO Mineral Resources* (virtual)
1405 - 1425	Building the “Right” Models at the Appropriate Scale	Charlotte Martin, *Shell International E&P*
1425 - 1445	AvaFan: Designing an analogue modelling project to study autogenic and allogenic processes	Yvonne Spychala, *RWTH Aachen University*
1445 - 1520	Tea & coffee break	
1520 - 1540	When is a geomodel ready to be sent to flow simulation?	Thomas Jerome
1540 - 1600		
1600 - 1645	Discussion and debate	
1645 - 1700	Wrap up of day one	
1700 - 1800	Drinks Reception & Poster session	

Tuesday 22 September		
0900 - 0930	Registration opens, tea & coffee	
0930 - 0940	Welcome address	
Session three: Useful modelling approaches | Yvonne Spychala & Lorenzo Mantiloni		
0940 - 1020	**Keynote:** Are morphodynamics experiments models?	Chris Paola, *University of Minnesota*
1020 - 1040	Useful models start and end with geology: Surface-based modelling and simulation for realistic flow	Carl Jacquemyn, *Imperial College London*
1040 - 1100	Representative Elementary Volumes: incorporating small scale heterogeneities and their impact on subsurface flow in Geo-models.	Jesse Marinus Steinvoort, *Delft University of Technology*
1100 - 1130	Tea & coffee break	
1130 - 1150	Don't Force the Forcing: Useful quantification of basin-scale allogenic controls.	Valentin Zuchuat, *CSIRO* (Virtual)
1150 - 1210	Testing the influence of allogenic influences (sediment concentration and grain size composition) on sediment transport by turbidity currents and depositional patterns of lobe deposits	Lealem Beza Zerihun, *RWTH Aachen University*
1210 - 1230	Understanding surface deformation driven by magmatism using scaled analogue models	Kate Williams, *University of Leeds*
1230 - 1300	Discussion and debate	
1300 - 1400	Lunch and posters	
1400 - 1420	Iterative Development of 3D Geological Model for Tunnelling in Heterogenous Quaternary Deposits and Faulted Bedrock: Integrating Ground Investigation, Geophysics, and Legacy Data	Edward Cox, *WSP*
1420 - 1440	Fracture Prediction from Structure Driven Deep Learning	Jean-Christophe Wrobel-Daveau, *Halliburton*
1440 - 1510	Tea & coffee break	
Session four: Integrating models and developing new approaches		
1510 - 1530	Modelling Risk and Uncertainty using Multipoint Statistics	Barrie Wells, *Conwy Valley Systems Limited*
1530 - 1550	Matching Subsurface Reservoirs to Outcrop Analogues: An Automated Analogue Finder Tool Using Synthetic Well Logs	Guillermo Bello, *University of Aberdeen*
1550 - 1610	Integrating Analogue and Geophysical Models: From Qualitative Insight to Quantitative Prediction	Chris Willacy, *Shell Research Ltd*
1610 - 1630	Making Digital Outcrops FAIR: A Community Platform for Preservation, Discovery, and Collaboration	Brian Burnham, *VRGeoscience Ltd*
1630 - 1700	Discussion, debate and wrap up	

Poster Title	Author(s)
Combined controls of basal detachment configuration and shortening rate on the geometry and kinematics of salt-bearing fold-and-thrust belts: New insights from scaled analogue experiments with dynamic digital strain analysis	Giumin Feng, *China University of Geosciences*
Rapid Reservoir Modelling: Sketch-based geological modelling with flow diagnostics	Carl Jacquemyn, *Imperial College London*
Sandbox Modelling of Thrust-Related Geometries in Dunga Gali–Kuza Gali Area, Southern Hazara Basin, Lesser Himalayas, Pakistan	Muhammad Armaghan Faisal Miraj, *University of the Punjab*
Identifying numerical model limitations from blind inversion of analogue and small-scale experiments	Janine Birnbaum, *Ludwig-Maxmilians-Universität München*
From inertial routing to preserved stratigraphy: Assessing pyDeltaRCM's ability to model fluvial architectures	Batbileg Tegshjargal, *Delft University of Technology*
Modelling magma ascent – a quantitative analogue setup	Saskia Willar-Sheehan, *University of Liverpool*
Spatio-temporal analysis of hydro-climatic vulnerability in the Mandoto watershed (Madagascar): impacts on water resources within a One Health framework	Miora Harivony Rakotondrabe, *University of Vakinankaratra*
Integrating Conceptual, Physical, and Data-Driven Models for Bypassed Pay Detection and Artificial Lift Diagnostics	Keith Holdaway
Check your footsteps - a model can only be useful when it honours the available data	John Marshall, *Skrinkle Reservoir Geology*

Convenors:

- **Prof. Peter Burgess** - University of Liverpool
- **Dr Brian Burnham** - VRGeoscience
- **Prof. Tim Dooley** - Bureau of Economic Geology, The University of Texas at Austin
- **Prof. Cathy Hollis** - University of Manchester
- **Prof. Janine Kavanagh** - University of Liverpool
- **Prof. Yvonne Spychala** - RWTH Aachen University
- **Dr Georg Warrlich** - Shell

THANK YOU

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