



# Basin and Petroleum Systems Modelling: Best Practices, Challenges and New Techniques

28-30 September 2021

Hybrid Conference, The Geological Society and Zoom, BST

## Programme

Day One	
08.30	<b>Registration</b>
08.45	<b>Welcome</b>
09.00	<b>IN PERSON</b> Keynote: The evolution of basin modelling and petroleum systems analysis through time Thomas Hantschel, Schlumberger
	<b>Session One: Data and Technology 1</b> Chairs - Friedemann Baur, <i>Chevron</i> & Daniel Palmowski, <i>Schlumberger</i>
09.45	<b>VIRTUAL</b> Investigation of migration dynamics in Sergipe-Alagoas Basin (Brazil): insights from a global sensitivity analysis powered by machine learning Mathieu Ducros, <i>Kognitus</i>
10.15	<b>IN PERSON</b> Kerogen typing from residual carbon data utilising a novel Rock-Eval programmed pyrolysis derived plot Michael Sims, <i>Imperial College London</i>
10.45	<b>VIRTUAL</b> Application of natural molecular tracers to estimation of volume of hydrocarbons in place Constantin Sandu, <i>Aramco</i>
11.15	<b>BREAK</b>
	<b>Session Two: Data and Technology 2</b> Chairs - Friedemann Baur, <i>Chevron</i> & Daniel Palmowski, <i>Schlumberger</i>
11.45	<b>IN PERSON</b> Pressure Lithotype Uncertainty Modelling and Evaluation (PLUME) – applying a stochastic approach to basin modelling and its implications for carrying subsurface uncertainty Herbert Volk, <i>BP</i>
12.15	<b>VIRTUAL</b> How to Reduce the Exploration Risk? A New Tool for Global Uncertainty Management Alcide Thebault & Marie Callies, <i>Beicip-Franlab, Rueil-Malmaison, France</i>
12.45	<b>VIRTUAL</b> Constraining the thermal history of the Exmouth Sub-basin (North West Shelf, Australia) Oliver Schenk, <i>Schlumberger</i>
13.15	<b>LUNCH</b>
	<b>Session Three: Integrating Data and Processes in BPSM – new challenges and new approaches in rift margins</b> Chair - Tiago Cunha, <i>IGI</i>

14.15	<b>IN PERSON</b> <b>Basin modeling of thermicity and diachronism of South Atlantic rifted margin: an example from the presalt of Brazil</b> Johannes Wendebourg, <i>Total E&amp;P Americas</i>
14.45	<b>VIRTUAL</b> <b>Automated Basin modelling of the Vøring volcanic margin</b> Sébastien Gac, <i>University of Oslo</i>
15.15	<b>IN PERSON</b> <b>Estimating Net Erosion in Sedimentary Basins: Examples from the Barents Sea</b> Karthik Iyer, <i>GeoModelling Solutions GmbH, Zurich, Switzerland</i>
15.45	<b>BREAK</b>
16.00	<b>Panel Discussion - Basin modelling philosophies</b> <b>Session leader - Julian Moore, APT</b>
17.00	<b>End of day one</b>

## Day Two

08.45	<b>Registration</b>
	<b>Session Four: Using subsurface data and basin modelling to predict source rock characteristics</b> Chair - Qusay Abeed, <i>Halliburton</i>
09.15	<b>IN PERSON</b> <b>Integration of Seismic Inversion and Petroleum Systems modeling - Mapping the Kudu Source Rock in the Walvis and Orange Basins, Offshore Namibia</b> Christian Nino, <i>Galp</i>
09.45	<b>IN PERSON</b> <b>Prediction of Aptian to Albian-aged potential source rocks, offshore Suriname, from integration of local and regional subsurface data</b> Andrew Dyson, <i>Cairn Energy</i>
10.15	<b>BREAK</b>
	<b>Session Five: Breaking convention: Biogenic and unconventional modelling case Studies</b> Chairs - Rachel Round, <i>Halliburton</i> & Christine Yallup, <i>Halliburton</i>
10.45	<b>VIRTUAL</b> <b>Biogenic gas source rock potential evaluation. Case study: Block AD7 Myanmar</b> Carolina Olivares, <i>CGG</i>
11.15	<b>IN PERSON</b> <b>Modelling Biogenic Gas Production at the Basin Scale: Application to the Bay of Biscay</b> Martina Torelli, <i>Sorbonne University</i>
11.45	<b>VIRTUAL</b> <b>Discrepancies in petroleum systems modeling and petroleum production within liquid rich unconventional resource plays: Understanding external contribution and fluid chemistry</b> Michael Abrams, <i>Imperial College London</i>
12.15	<b>VIRTUAL</b> <b>Maturation history modeling of the petroleum systems of the Williston Basin, USA</b> Sarah Gelman, <i>USGS</i>
12.45	<b>LUNCH</b>

13.45	<b>VIRTUAL</b> Keynote: Top-down Petroleum System Analysis and Fluid Property Prediction Zhiyong He, <i>Zetaware</i>
	<b>Session Six: Communicating results - dealing with predicted risk &amp; uncertainty</b> Chair - David Rajmon, <i>GeoSophix</i>
14.30	<b>VIRTUAL</b> Probabilistic BPSM for decision making – Where is the balance between complexity, uncertainty, and practicality? Martin Neumaier, <i>Imperial College London &amp; Ucon Geoconsulting</i>
15.00	<b>VIRTUAL</b> Some novel thoughts on risk analysis Douglas Waples, <i>Sirius Exploration Geochemistry</i>
15.30	<b>BREAK</b>
	<b>Session Six Continued: Communicating results - interactive exercise</b> Chair - David Rajmon, <i>GeoSophix</i>
15.45	<b>VIRTUAL</b> MINE THE GAP (Cognitive therapy for basin modellers) Guy Loftus, <i>K2V</i>
17.00	Social Event - Please join us to network and casually discuss the future of subsurface geo-process modeling <i>In Person – Lower Library</i> <i>Virtual – Zoom</i>

<b>Day Three</b>	
	<b>Registration</b>
08.30	<b>Welcome</b>
08.45	<b>VIRTUAL</b> Keynote: Drivers for the Future of Basin and Petroleum Systems Modelling - Challenges & Opportunities in an Accelerating Energy Transition Neil Frewin, <i>Shell</i>
	<b>Session Seven: Linking basin modelling with other disciplines - novel applications of BPSM techniques</b> Chair - Dani Schmid, <i>Geomodelling Solutions</i>
09.30	<b>IN PERSON</b> Choices in benchmarks, models, and guestimates of hydrocarbon columns Ebbe Hartz, <i>AkerBP</i>
10.00	<b>VIRTUAL</b> Petroleum system modeling approaches for marine mineral systems Lars Rüpke, <i>GEOMAR Helmholtz Center for Ocean Research Kiel</i>
10.30	<b>VIRTUAL</b> Recent advances in computational geosciences Boris Kaus, <i>Institute of Geosciences, Johannes-Gutenberg University Mainz &amp; SmartTectonics GmbH</i>
11.00	<b>BREAK</b>
	<b>Session Eight: Basin modelling for CO2 and CCS</b> Chair - Will Prendergast, <i>CNOOC</i>



11.15	<b>VIRTUAL</b> <b>Multi-scale cap rock assessment for CO2 storage, insights from the Northern Lights project (Norwegian Continental Shelf)</b> Renata Meneguolo, <i>Equinor</i>
11.45	<b>VIRTUAL</b> <b>Time-lapse seismic imaging and fluid dynamics of CO2 storage at the Sleipner Field, North Sea</b> Nicky White, <i>University of Cambridge</i>
12.15	<b>VIRTUAL</b> <b>The Impacts in Pressure Stabilization and Leasing Acreage for CO2 Storage from Utilizing Oil Migration Concepts</b> Melianna Ulfah, <i>Jackson School of Geosciences, The University of Texas Austin</i>
12.45	<b>IN PERSON</b> <b>Applying hydrocarbon migration modelling principle to the simulation of the capillary-dominated flow of sequestered CO2 in saline aquifers: Case study from the Sleipner storage operation</b> Geovani C. Kaeng, <i>Halliburton</i>
13.15	<b>LUNCH</b>
	<b>Session Nine: Geothermal, hydrogen and other applications</b> Chair - David Gardiner, <i>IGI</i> & Helen Doran, <i>Ola Geoscience</i>
14.15	<b>VIRTUAL</b> <b>Energy transition as a new challenge for basin modelling</b> Marie-Christine Cacas-Stentz, <i>IFPEN</i>
14.45	<b>VIRTUAL</b> <b>Probabilistic Modelling of Present-Day Geothermal Heat Flow: Lessons for Future Exploration</b> Alex Dickinson, <i>Newcastle University</i>
15.15	<b>IN PERSON</b> <b>The simulation of hydrogen storage in saline aquifers</b> Niklas Heinemann, <i>University of Edinburgh</i>
15.45	<b>Break</b>
16.00	<b>Meeting wrap up discussion – The role of basin modelling in exploration in 2021 and beyond</b> <b>Session leaders - Neil Piggott, VP Exploration Global Strategy, Hess, Micheal Abrams, Imperial College London, Rachel Round, Halliburton</b>
17.00	<b>End of Conference</b>