



# Industrial Structural Geology

28-30 November 2012

## PROGRAMME

Wednesday 28 November	
8:00	<b>Registration and Coffee</b>
9:00	<b>Welcome and Opening Remarks</b>
	<b>Session 1: Regional &amp; Basin Scale 1</b> <b>Chair: Nick Richardson and Frank Richards</b>
9:05	<b>Opening Address: Joe Cartwright (Oxford University)</b> What has Structural Geology Research Ever Done for You?
9:45	<b>Keynote Presentation: Nicky White (Cambridge University)</b> Epeirogenic Elephants in the Orogenic Room
10:25	<b>Alex Bump (BP)</b> Subsidence History of the Arabian Plate: Setting the Stage for the World's Largest Hydrocarbon System
10:45	<b>Coffee and Poster Session</b>
	<b>Session 2: Regional &amp; Basin Scale 2</b>
11:00	<b>Invited Speaker: Jakob Skogseid (Statoil)</b> Extension on Rifted Continental Margins: 2D Seismic Meets 3D Industry Realities
11:30	<b>Alan Roberts (Badley Geoscience)</b> Integrated Geodynamic Modelling as an Aid to Understanding Deepwater Rifted Continental Margin Structure and Location
11:50	<b>Nick Kusznir (University of Liverpool)</b> Mapping Continental Margin Crustal Thickness and Ocean-Continent Transition Using Satellite Gravity Inversion: A New Frontier Exploration Technology
12:10	<b>Sheona Masterton (Getech)</b> Atlantic Fracture Zones as Indicators of Changing Plate Tectonic Stress and their Link to the Evolution of Intra-Continental Rift Basins
12:30	<b>Lunch and Poster Session</b>
	<b>Session 3: Regional &amp; Basin Scale 3</b> <b>Chairs: Simon Stewart and Steve Rippington</b>
13:30	<b>Keynote Presentation: Martin Jackson (Applied Geodynamics Laboratory)</b> Coeval Extension and Shortening Above and Below Salt Canopies on an Uplifted, Continental Margin: Application to the Northern Gulf of Mexico
14:10	<b>Tiago Alves (Cardiff University)</b> Diachronous Gravitational Gliding of Albian Rafts Offshore Brazil
14:30	<b>Chris Morley (PTTEP)</b> The Origin of Separate Oil and Gas Accumulations in Adjacent Anticlines in Central Iran
14:50	<b>Coffee and Poster Session</b>
	<b>Session 4: Regional &amp; Basin Scale 4</b>
15:40	<b>Keynote Presentation: John Cosgrove (Imperial College London)</b> The Association of Folding and Fracturing and the Bulk Properties of Fracture Networks

16.20	<b>Sukonmeth Jitmahantakul (Royal Holloway University of London)</b> The 4D Evolution of Segmented Rift Systems: Insights from Scaled Physical Models
16.40	<b>Keynote Presentation: Paul MacKay (Shale Petroleum)</b> The Development of Thrust Belts and the Influence of Fluid Pressure
17:20	<b>Discussion</b>
<b>17.30</b>	<b>End</b>
<b>17.30 - 19:00</b>	<b>Drinks (library)</b>

## Thursday 29 November

8.30	<b>Registration and Coffee</b>
	<b>Session 5: Prospect Scale 1</b> <b>Chairs: Clare Bond and Douglas Paton</b>
8.50	<b>Keynote Presentation: Graham Yielding (Badley Geoscience)</b> Structural Trapping of Buoyant Fluids
9.30	<b>Frode Georgsen (Norwegian Computing Centre)</b> Fault Uncertainty Modelling
9.50	<b>Lydia Jagger (Royal Holloway University of London)</b> Analogue Modelling of Inverted Domino-Style Fault Systems
10.10	<b>Atle Rotevatn (Uni-CIPR)</b> How Long is a Fault? The Implications of (not) Understanding Fault Dimensions from Seismic Data in Exploration and Production
10.30	<b>Coffee and Poster Session</b>
	<b>Session 6: Prospect Scale 2</b>
10.50	<b>Keynote Presentation: John Walsh (Fault Analysis Group)</b> The Impact of Fault Segmentation and Relays on Hydrocarbon and Mineral Flow Systems
11.30	<b>Sylvester Egbeni (Royal Holloway University of London)</b> Basement-Related Transfer Faults or Lineaments in the Faeroe-Shetland Basin. A New insight from analysis of 3D data from the Muckle Sub basin
11.50	<b>Craig Magee (Imperial College London)</b> Fault-controlled Igneous Intrusion and its Impacts on Sedimentary Basin and Petroleum System Evolution
12.10	<b>Lunch and Poster Session</b>
	<b>Session 7: Prospect Scale 3</b> <b>Chairs: Matthew Allen and John Karlo</b>
13.00	<b>Michael Lee (Hess)</b> Structural controls on the preservation of pre-rift stratigraphy in the North Red Sea, Egypt
13.20	<b>Christopher Wild (Cardiff University)</b> Kinematic Indicators of Strike-Slip Faults in 3D Seismic Data: Implications for Fault Propagation, Levant Basin
13.40	<b>Roddy Muir (Midland Valley)</b> Integrating Digital Mapping with Constrained Model Building and Structural Validation
14.00	<b>Ken McCaffrey (Durham University)</b> Fracture Characterisation in Crystalline Basement: Building an Analogue for the Clair Basement Based on the Lewisian Gneiss Complex of NW Scotland
14.20	<b>Bob Holdsworth (Durham University)</b> Absolute age dating of faulting using rhenium-osmium (Re-Os) geochronology in ore deposits and hydrocarbon basins
14.40	<b>Coffee and Poster Session</b>
	<b>Session 8: Uncertainty, Risk, Value</b>
15.10	<b>Keynote Presentation: Richard Swarbrick (Ikon GeoPressure)</b> Structural Controls on Pressure and Influences of Pressure on Structure
15.50	<b>Clare Bond (University of Aberdeen)</b> Constraining the Question - Addressing Uncertainties in Industry Data without Trying to Reduce the Irreducible

16:10	<b>Douglas Paton (University of Leeds)</b> Is petroleum geoscience research just cheap labour for the industry?
16:30	<b>Simon Stewart (Saudi Aramco)</b> What Value is Structural Geology to the Petroleum Industry?
16:50	<b>Discussion</b>
17:30	<b>End</b>
18.00	<b>Buses to Brewdog, Camden Town (Beer Tasting Evening)</b>
22:00	<b>Return bus from Brewdog Camden to Burlington House (optional)</b>

## Friday 30 November

	<b>Session 9: Development, Fractures and Geomechanics 1</b> <b>Chairs: Richard Fox and Paul MacKay</b>
9:00	<b>Keynote Presentation: Dave Sanderson (University of Southampton)</b> Estimating the Fracture Network Properties from the Confines of a Well
9:40	<b>Alan Wood (University of Leeds)</b> Simulated Hydrocarbon Production across Outcrop-Derived Versus Seismically-Resolvable Faults
10:00	<b>Invited Speaker: Dave Healy (University of Aberdeen)</b> An Integrated Tensorial Approach for Characterising Fractured Rocks
10:30	<b>Michael Welch (RDR)</b> A new mechanical modelling approach to predict fault and fracture density and connectivity in a mechanically layered sequence
10:50	<b>Coffee and Poster Session</b>
	<b>Session 10: Development, Fractures and Geomechanics 2</b>
11:05	<b>Marcel Frehner (ETH Zurich)</b> Combining Laboratory and Computational Experiments to Increase Rock Physics Knowledge
11:25	<b>Steven Ogilvie (BP)</b> Structural Geology and Well Planning in the Clair Field
11:45	<b>Keynote Presentation: Tom Blenkinsop (James Cook University)</b> Comprehensive analysis and visualisation of structures in orientated drill core: a minerals perspective
12:25	<b>Lunch</b>
	<b>Session 11: Development, Fractures and Geomechanics 3</b> <b>Chairs: Caroline Gill and Woody Wilson</b>
13:00	<b>Invited Speaker: Dave Quinn (Badley Geoscience)</b> A Geomechanical Study of the Gorm Field, Danish Central Graben: Predicting Fracture Density, Orientation and Hydraulic Behaviour in a Chalk Reservoir
13:30	<b>Irene Mannino (Midland Valley)</b> Testing restoration-based fractures prediction within a fault damage-zone in carbonate rocks: the Filettino fault, Central Apennines, Italy
13.50	<b>Stephan Bergbauer (BP)</b> Unlocking resources in fractured reservoirs using geomechanical tools – an example from the Hoton field, Southern North Sea
14.10	<b>Keynote Presentation: Steve Jolley (Shell)</b> Applied structural geology in petroleum exploration and production
14.50	<b>Discussion</b>
15:20	<b>Closing Remarks</b>
15:30	<b>Conference Ends</b>

<b>Poster Programme</b>	
<b>Abdullah Awdal (University of Aberdeen)</b>	Geometric Analysis of Lozenges and Fluid Flow in Faulted Sandstones
<b>Anna Dicharante (University of Durham)</b>	A Reappraisal of the Deformation History, Kinematics and Absolute Age of Faulting in the West Orkney – Orcadian Basin System, Caithness, Scotland
<b>Natalie Farrell (University of Aberdeen)</b>	Petrophysical Anisotropy in Faulted Porous Sandstones
<b>Marcel Frehner (ETH Zurich)</b>	Dynamical Unfolding for Quality Control of Geological Cross-Sections
<b>Claire Glover (Fugro Robertson Ltd)</b>	Spatial characterisation of fracture systems: a comprehensive global database of fully-attributed multi-scale fracture data
<b>Ann Murray (Wildcat Geoscience Ltd)</b>	Constraining Open and Flowing Fractures in Basement Rocks, Say'un Masila Basin, Yemen
<b>Yago Nestola (University of Parma)</b>	Analogue Models of Lithospheric-Necking Evolution during Rifting
<b>Bansri Raithatha (University of Durham)</b>	3D fault and fracture networks in layered volcanic- volcanoclastic sequences from terrestrial LIDAR datasets: North Atlantic Igneous Province
<b>Nick Roberts (University of Edinburgh)</b>	Investigating the controls on Chalk structuration in the Central North Sea
<b>Paola Sala (University of Bern)</b>	Modeling Near Surface with Shallow Borehole Information
<b>Paola Sala (University of Bern)</b>	Alpine Fold and Thrust Structures: A 3-D Model of the Säntis Area (Switzerland)
<b>Luis E. Salomón-Mora (University of Aberdeen)</b>	Distinguishing Structural Styles and Evolution of the Salt and Shale Tectonic Provinces of the Western Gulf Of Mexico
<b>Manuela Stehle (Imperial College London)</b>	An Outcrop Study of Fracturing in the Layered Carbonates Above a Salt Diapir (Jebel Madar, Oman): A Template for Subsurface Analysis
<b>Anne Randi Syversveen (Norwegian Computing Center)</b>	A Study on How Cap Rock Geometry Influences the CO <sub>2</sub> Storage Capacity
<b>John Watson (Fugro Robertson Ltd)</b>	Modelling the evolution of the Indian Ocean using combined rigid/deformable plate tectonic reconstructions
<b>Luisa Zuluaga (Uni-CIPR)</b>	Structural Reservoir Heterogeneity Induced by Forced Folding in Sandstone Reservoirs: the San Rafael Reef Monocline, Utah, USA