



**NERC CDT in Oil and Gas
Annual Conference 2017
Student Presentation Schedule - 2014 Cohort**

| Time | Biosphere | Hutton Room | Salisbury Room |
|---------------|--|---|--|
| 14:00 - 14:20 | Scott Jess (Aberdeen) <i>Resolving the timing of major erosion events along the West Greenland-Baffin-Bylot continental margins</i> | Silvia Sosio De Rosa (Strathclyde) <i>Fault zone architecture and deformation mechanisms of a normal fault in poorly lithified sediments, Miri (Malaysia)</i> | Nick Ward (Cardiff) <i>The scale and geometry of differential compaction on passive continental margins</i> |
| 14:20 - 14:40 | Sean O'Neill (Durham) <i>Pore pressure driven well control issues: A case study of the McKee-13 blowout, Taranaki Basin, New Zealand</i> | Elizabeth Atar (Durham) <i>Temporal and Spatial Heterogeneities in the Jurassic Kimmeridge Clay</i> | Katy Oakes (Dundee) <i>Assessing the impact and mitigation of earthquake hazards on oil and gas production infrastructure</i> |
| 14:40 - 15:00 | Tom Snell (Durham) <i>Modelling Fluid Overpressure Driven Faulting and Seismicity within Low Porosity Seal and Tight Reservoir Rocks</i> | Ricardo Celestino (Exeter) <i>Lower Jurassic Source Rocks of Germany and Netherlands</i> | Janis Aleksans (Glasgow) <i>Dynamics of hydrofracturing and microseismic signals in porous versus tight rocks</i> |
| 15:00 - 15:20 | Johanne Vad (Heriot-Watt) <i>Environmental assessment of deep-water sponge fields in relation to oil and gas activity: a west of Shetland case study</i> | Nathaniel Forbes-Inskip (Royal Holloway) <i>New Methods for Maximising Shale Permeability and Minimising Risk During Hydraulic Fracturing</i> | Ross Grant (Heriot-Watt) <i>Unravelling the controls on the Permian and Mesozoic structural-stratigraphic evolution of the southwestern margin of the Southern North Sea</i> |
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| 16:00 - 16:20 | Asiri Obeysekera <i>A Fully Coupled Discrete-Continuous Numerical Approach for Hydrofracture Interaction and Flow Modelling</i> | Ginny-Marie Bradley (Manchester) <i>Developing better reservoir models for Early Palaeozoic, (pre land plants), mixed continental/marine depositional systems, with improved reservoir characterisation and architectural input</i> | Eoin Dunlevy <i>Shelf edge processes and reservoir architecture on high-sedimentation rate clastic/volcanic basin margins, Taranaki Basin, New Zealand</i> |
| 16:20 - 16:40 | David Byrne <i>Using noble gas isotopes to develop a mechanistic understanding of shale gas processes</i> | Aleksandra Svalova (Newcastle) <i>Ultrasound spectrometry of the aggregation of asphaltenes during the formation of water-in-oil emulsions</i> | Nathan Rochelle-Bates <i>Regional tectonostratigraphy of the pre-salt in the Benguela-Namibe Basins, Angola</i> |
| 16:40 - 17:00 | | Jamie Hizzett (Southampton) <i>Understanding how turbidity currents interact with the seafloor and oil and gas pipelines</i> | Xiaodong Yang (Southampton) <i>Are deep-water fold belts on passive margins different from fold belts in orogenic belts?</i> |

Exploitation in Challenging Environments

| Board No. | Name | University | Cohort | PhD Project Title |
|-----------|----------------------|----------------|--------|--|
| 12 | Ulrike Baranowski | Birmingham | 2014 | Early Eocene Palaeoenvironmental and Tectonic Reconstructions of the Rockall Trough |
| 13 | Sean O'Neill | Durham | 2014 | Pore pressure distribution, overpressure evolution and reservoir quality variations across a tectonostratigraphically complex basin, Taranaki Basin, New Zealand |
| 14 | Adam Cawood | Aberdeen | 2015 | Quantifying strain partitioning in multi-layers in fold-forelimbs: implications for reservoir quality and connectivity |
| 15 | Callum Fry | Southampton | 2015 | High resolution 3D seismic imaging of Polygonal Fault Systems |
| 16 | Mike Lacey | Manchester | 2015 | The effect of pore size and geometry on flow in carbonate pore systems |
| 17 | Tin Tin Naing | Oxford | 2015 | Exploring the petroleum potential of a frontier province: Cretaceous stratigraphy and environments of coastal Myanmar |
| 18 | Marco Pizzi | Imperial | 2015 | Predicting slope reservoir distribution & quality through quantification of tectonic influence and autocyclic processes |
| 19 | Daniel Possee | Southampton | 2015 | Seismic imaging of the crust and upper mantle beneath Haiti and the Caribbean Sea |
| 20 | Jack Richardson | Birmingham | 2015 | Revealing the internal flow of salt structures |
| 21 | David Taylor | Manchester | 2015 | Numerical simulation of braided river systems for improved object and MPS-based reservoir modelling |
| 22 | James Van Tuyl | Cardiff | 2015 | Carbonate platforms on Equatorial Margins: Geometry, evolution and importance as hydrocarbon reservoirs |
| 23 | Claire Veillard | Imperial | 2015 | Diagenetic processes in carbonate reservoirs: from direct investigation to modelling of pore-scale diagenesis |
| 24 | Stavros Vrachliotis | Heriot-Watt | 2015 | The causes and consequences of punctuated contraction on passive continental margins |
| 25 | Kayode Adeoye-Akinde | Royal Holloway | 2016 | New methods for forecasting the permeability of fractured reservoirs |
| 26 | Mark Ashworth | Heriot-Watt | 2016 | Modelling of Geo-mechanical – Hydro-mechanical Coupling in Fractured Reservoirs |
| 27 | Karl Clark | Keele | 2016 | Sedimentary controls on secondary processes: Deformation bands in reservoirs |
| 28 | Ryan Claydon | Birmingham | 2016 | In-situ Upgrading of Oil Using Naturally Occurring Clay Minerals and Hydrotalcites |
| 29 | David Cox | Manchester | 2016 | Impact of glaciation on Arctic petroleum systems: seismic geomorphology and petroleum systems modelling offshore West Greenland and West Norway |

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| 30 | Georgios-Pavlos Farangitakis | Durham | 2016 | Structural and Thermal Evolution of Continent-Ocean Fracture Zones |
| 31 | James King | Oxford | 2016 | The propagation and growth of polygonal faults |
| 32 | Bartosz Kurjanski | Aberdeen | 2016 | Characterisation of glacial reservoirs and landsystems using sedimentology, geomorphology and virtual outcrop mapping |
| 33 | Hamish Mitchell | Imperial | 2016 | Quantifying the relationship between structural growth rate and the morphology of submarine channels and reservoir facies from shelf-edge to deep water |
| 34 | Vanessa Monteleone | Southampton | 2016 | Crustal and sedimentary structure of the Eastern Black Sea Basin from long-offset seismic reflection data |
| 35 | Eleanor Pitcher | Nottingham | 2016 | Novel characterisation methods for pore systems of seal rocks in reservoirs used for downhole hydrogen production and storage |
| 36 | Chantelle Roelofse | Cardiff | 2016 | Fluid flow paths through sedimentary basins: Implications for exploration in challenging geological environments |
| 37 | Sascha Holland | Oxford | 2016 | Authigenic mineral corrosion and the origins of secondary porosity in lacustrine carbonate reservoirs: An experimental approach |
| 38 | Catriona Sellick | Durham | 2016 | Understanding the controls of fines migration in sandstones |
| 39 | Euan Soutter | Manchester | 2016 | Deep-marine reservoir heterogeneity in steep-sided minibasins - influence of basin physiography on sedimentological processes and basin-fill character |
| 40 | Jack Stacey | Manchester | 2016 | Determination of basin-scale fluid flux to understand porosity distribution within mature carbonate basins |
| 41 | Paul-Ross Thomson | Royal Holloway | 2016 | Numerical modelling of reactive multiphase flow in low-porosity reservoirs |
| 61 | Bhavik Lodhia | Imperial | 2014 | Uplift and Deposition of Sediment at Passive Margins: Examples from Africa |
| 62 | Jonathon Hardman | Aberdeen | 2014 | Unlocking the intra and sub-basalt hydrocarbon prospectivity West of Shetland |

Unconventional Hydrocarbons

| Board No. | Name | University | Cohort | PhD Project Title |
|-----------|-------------------------|----------------|--------|--|
| 42 | Nathaniel Forbes-Inskip | Royal Holloway | 2014 | New Methods for Maximising Shale Permeability and Minimising Risk During Hydraulic Fracturing |
| 43 | Tanya Beattie | Southampton | 2015 | Source rocks, thermal history and unconventional in the Weald Basin |
| 44 | Ilaria Gaiani | Durham | 2015 | Quantitative porosity characterization in carbonate-rich shales: the Eagle Ford example |
| 45 | Luke Jenkins | Oxford | 2015 | Modelling gas injection and migration through layered sedimentary sequences |
| 46 | Jack Walker | Newcastle | 2015 | Shale Gas in the UK – Geochemical mapping of critical shale properties across Carboniferous basins |
| 47 | Muhammad Ahsan | Imperial | 2016 | Geological life cycle inventory model development for conventional and unconventional hydrocarbon resources |
| 48 | Iain Anderson | Heriot-Watt | 2016 | Analysis of shale mineralogy and fabric and its induced anisotropic seismic response for hydrocarbon exploration and production |
| 49 | Amy Elson | Southampton | 2016 | Unconventionals of Green River Formation Oil Shales |
| 50 | Tom Fender | Newcastle | 2016 | Evolution of mechanical properties of organic matter in fine grained rocks |
| 51 | Eamon McKenna | Glasgow | 2016 | Constraining the thermal histories of the Carboniferous Midland Valley of Scotland: a potential resource for unconventional gas and shale oil? |
| 52 | Izabella Otalega | Strathclyde | 2016 | Assessment of the Potentially Toxic Element sources in the UK Unconventional Gas Resources |

Environmental Impact & Regulation

| Board No. | Name | University | Cohort | PhD Project Title |
|-----------|--------------------|-------------|--------|---|
| 53 | Aleksandra Svalova | Newcastle | 2014 | Ultrasound spectrometry of the aggregation of asphaltenes during the formation of water-in-oil emulsions |
| 54 | Faraaz Ahmad | Manchester | 2015 | Radionuclide Fate in Naturally Occurring Radioactive Materials (NORM) Relevant to the Oil Industry |
| 55 | Anran Cheng | Oxford | 2015 | Quantifying crustal fluid systems using noble gas isotopes |
| 56 | Emily Crowder | Aberdeen | 2015 | Seismic imaging without a source: Towards cost effective and low environmental impact hydrocarbon exploration |
| 57 | Laura Duran | Heriot-Watt | 2015 | Evaluating the resilience of sea surface and deepwater systems to recover from oil spills in the Faroe-Shetland Channel |
| 58 | Hosne Jahan | Nottingham | 2015 | Achieving effective and low-impact production of heavy oil |
| 59 | Christina Nikolova | Heriot-Watt | 2016 | Development of natural and sustainable bio-dispersants for the Oil & Gas industry |
| 60 | Raquel Serrano | Dundee | 2016 | Understanding hydrocarbon impacts on vegetation and detection with remote sensing |



Extending the Life of Mature Basins

| Board No. | Name | University | Cohort | PhD Project Title |
|-----------|--------------------|-------------|--------|---|
| 1 | James Foey | Keele | 2015 | The influence of halokinesis on shallow-marine sediments in salt basins: The Fulmar Formation, Central North Sea, UK |
| 2 | Allan Hollinsworth | Glasgow | 2015 | Understanding porosity-permeability evolution of basement faults using 4D computed X-ray tomography |
| 3 | Hossam Osman | Imperial | 2015 | Next generation reservoir simulation of complex reservoirs using control-volume-finite-element methods and unstructured, adaptive meshing |
| 4 | Tom Utley | Durham | 2015 | A reservoir-scale structural reappraisal of onshore Devonian analogues of the Clair Group in the Fair Isle-Shetland region |
| 5 | Faye Walker | Aberdeen | 2015 | Linking rifting history and magmatic cyclicity West of Britain (WoB) |
| 6 | Charlotte Beasley | Exeter | 2016 | Investigating Paleogene strata from Oman and the UAE; new insights from integrated chemostratigraphy, sedimentology and biostratigraphy |
| 7 | Donald Christie | Southampton | 2016 | Reconstructing the ocean floor shape in turbidite basins using seismic interpretation, forward modelling, and outcrop analogues |
| 8 | Laura-Jane Fyfe | Aberdeen | 2016 | Hydrocarbon prospectivity of the inshore basins along Scotland's West Coast |
| 9 | Charlotte Priddy | Keele | 2016 | Climatic cyclicity and environmental interactions in arid continental basins: The Lemn Sandstone, Southern North Sea |
| 10 | Panayiota Sketsiou | Aberdeen | 2016 | Extending the life of mature basins in the North Sea and imaging sub-basalt and sub-intrusive structures using seismic intensity monitoring |
| 11 | Rachael Hunter | Heriot-Watt | 2014 | Investigating the Role of Structural Inheritance and Crustal Heterogeneity in the Evolution of the North Sea |