

09.00 Arrivals & Refreshments

Registration & coffee and tea on arrival

10.00 Morning Session: State-of-the-art in Shale gas research**10.00 Welcome & Introduction to ShaleXenvironmentT project**

Alberto Striolo & Adrian Jones, University College London (Coordinators of ShaleXenvironmentT)

10.20 A UK Geological perspective of energy reserves

David Schofield, British Geological Survey

The British Geological Survey is charged of estimating the UK's shale gas resource, and of investigating the environmental consequences of shale gas extraction if this was to occur. BGS's job is also to communicate clearly and without bias to government, industry and the public about shale gas resource and environmental sustainability.

10.40 Geological processes and characterization of the UK Carboniferous Bowland-Hodder Shale

Kevin Taylor, University of Manchester

An improved understanding of the geological processes operating during, and after, the deposition of the Carboniferous Bowland and Hodder Shales is key to better prediction of play variability. This presentation will document and discuss the facies and micro-facies variability present within these shales from key boreholes, the variability between these facies types, models for depositionally-driven variability and an overview of the role of chemical diagenesis in overprinting these rocks.

11.00 Hydraulic Fracturing, Microseismic Monitoring and Induced Seismicity

James Verdon, University of Bristol

In this talk will be presented two case studies, where hydraulic fracturing has led to fault re-activation. These sites have been monitored with downhole microseismic arrays, allowing the fault re-activation process to be imaged in unprecedented detail, affording us a much improved understanding of how hydraulic fractures and faults interact.

11.20 The potential for fracturing fluid additives to stimulate biological souring of shale gas

Sophie Nixon, University of Manchester

In this talk will be presented results from bioreactor experiments in which the potential for guar gum, the most commonly used gelling agent in fracturing fluids, to stimulate biogenic souring was assessed. The potential for other fracturing fluid additives to stimulate biogenic sulfide production are also discussed.

11.40 Anisotropic permeability behaviour of clay-rich shales

Nils Backeberg, University College London

Very thin laminated claystones have a continuous anisotropy across mm to nm scales, which we can characterize using petrophysical, chemical and ultra-high resolution X-ray tomographic techniques. The nano-scale anisotropy of shales may hold answers to the longevity of shale gas producing wells, which ultimately allows for more accurate reservoir estimations.

12.00 Cutting edge imaging techniques for shales

Peter Lee, University of Manchester

The current state of the art techniques for imaging shales will be reviewed, and examples given which include both multi-scale and multi-modal imaging, focussing on how the data can be both quantified and used to inform models of shale behaviour by linking from the nanometre scale to cores samples.

12.20 Lunch & Poster session

Time for interactions between students, researchers, speakers and other attendees

14.00 Afternoon Session & Panel Discussion: Perspectives for the future of Shale gas research**14.00 KEYNOTE #1 [Accepted, title of the talk TBC]**

Professor John Loughhead, Chief Scientific Advisor and Director General of the UK Department for Business, Energy and Industrial Strategy

14.20 Introduction to Fracking

Pickard Trepess, FracPT FZE

The presentation gives a brief overview of the hydraulic fracturing process and also covers some of the environmental issues we need to address to perform the operation responsibly in both shale and coal seam fracturing.

14.40 A comparison of US to EU/UK shale development

Richard Day, Halliburton

15.00 The role of good science in modern environmental regulation

Gary Edwards, UK Environment Agency

Good science is only of value in modern environmental regulation when it is communicated effectively to relevant stakeholder groups. This talk will illustrate using practical examples how scientific study is being used to inform the regulatory approach to shale gas in order to protect communities and the environment.

15.20 Panel Discussion

Panel Members: Alastair Fraser, Gary Edwards

16.20 Closing remarks

Alberto Striolo & Adrian Jones, University College London (Coordinators of ShaleXenvironmentT)

16.30 End of the forum