



The
Geological
Society

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Groundwater in Fractured Bedrock Environments

Friday 10 June 2016

Programme

08.30	Registration & tea, coffee
Session 1: Island of Ireland	
09.30	Welcome Address
09.40	Charcterisation of aquifer properties in Irish fractured bedrock aquifers Natalya Hunter Williams (Geological Survey of Ireland)
10.00	Groundwater challenges in Northern Ireland for the 2nd River Basin Plans Silke Hartmann (Northern Ireland Environment Agency)
10.20	Catchment-scale heterogeneity of hydraulic properties in the Irish weathered/fractured bedrock aquifers: Implications for aquifer typology and groundwater flowpaths JC Comte (University of Aberdeen)
10.40	Analysis of groundwater-level response to rainfall and estimation of annual recharge in fractured hard rock aquifers, NW Ireland Zuansi Cai (Queen's University Belfast)
11.00	Tea & coffee break and posters
Session 2: Africa	
11.40	Groundwater in fractured bedrock environments: Managing catchment and subsurface resources Robin Hazell
12.00	Analysis and numerical modelling of large-scale controls on aquifer structure and hydrogeological properties in the African basement: a practical example in Benin, West Africa Neil Dickson (Queen's University Belfast)
12.20	Fractures in shale: The importance of igneous intrusions Alan MacDonald (British Geological Survey)
12.40	A baseline study of scarce groundwater resources in anticipation of hydraulic fracturing for shale gas in the Karoo, South Africa Divan Stroebel (Africa Earth Observatory Network/NMMU)
13.00	Lunch and posters
Session 3: Application & Techniques	
14.00	A methodology for assessing the risks to groundwater from preferential flow from subsurface hydrocarbon exploitation through faults and fractures Sian Loveless (British Geological Survey)
14:20	Managing complex fractured subsurface resources using a hydromechanically coupled DFN approach Rita Kamera (Golder)
14:40	Quantative analysis of fault and fracture systems and their impact on groundwater flow in Irish bedrock aquifers John Paul Moore (University College Dublin)
15.00	Narrow vertical fracture zones – an unrecognised groundwater resource George Reynolds (Metrics Consulting)
15.20	Is magnetic resonance sounding efficient to characterise hydrogeological properties of bed rock aquifers? Fabrice Lawson (University of Abomey-Calavi / IRD)

15.40	Tea & coffee break
Session 4: Britain	
16.10	Scotland's fractured aquifers Brighid Ó Dochartaigh (British Geological Survey)
16.30	Case study in the fate, transport and management of petroleum hydrocarbon contaminants in a fractured bedrock aquifer Duncan Cartwright (WSP Parsons Brinckerhoff)
16.50	Characterising flow heterogeneities in a fractured aquifer: Triassic St Bees sandstone formation (NW England, UK) Giacomo Medici (University of Leeds)
17.10	Closing remarks
18.30	Conference BBQ (pre-registration necessary)

Posters

<p>A developing conceptual and numerical groundwater model for Drakeslands Tungsten Mine in Devon, the UK's first new mine in 45 years Gerry Baker (RPS Group)</p>
<p>Horizontal drilling to supplement collection of mineralised fracture flow groundwater Richard Cheal (Schlumberger Water Services)</p>
<p>Optimising fracture and drilling location selection for fractured rock development through a calibrated full 3D discrete fracture network natural and hydraulic fracturing approach Mark Cottrell (Golder Associates)</p>
<p>Constraining uncertainty in understanding fluid flow and its potential to influence seismicity in the Southern Alps mountain belt, New Zealand Jamie Coussens (University of Southampton)</p>
<p>Geothermal Pre-feasibility study for Offenham Thomas Eckhardt (Mouchel Consulting)</p>
<p>Hydrogeochemistry in Spanish fractured bedrock environments Luis Marcos (University of Burgos)</p>
<p>Rural Borewell Scheme: Northern Ireland Johanna Neary (WYG)</p>
<p>Fracture – conduit interactions in the Carboniferous Limestone Christopher Newton (Arup)</p>
<p>Frameworks, processes and parameters to consider for long-timescale analytical models of heat transfer through fractured aquifers Oleksandra Pedchenko (University of Southampton)</p>
<p>Towards calculating national annual average deep and shallow groundwater throughout capacities in Irish poorly productive bedrock aquifers Katie Tedd (Geological Survey of Ireland)</p>
<p>Mapping the transition zone: The Geology Survey of Ireland's transition zone story map Katie Tedd (Geological Survey of Ireland)</p>