



THE CENTRAL SCOTLAND REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Notice of event: Tuesday 17th April 2018

Room 5.09a, James Weir Building, Level 5,
75 Montrose Street, University of Strathclyde,
Glasgow, G1 1XJ

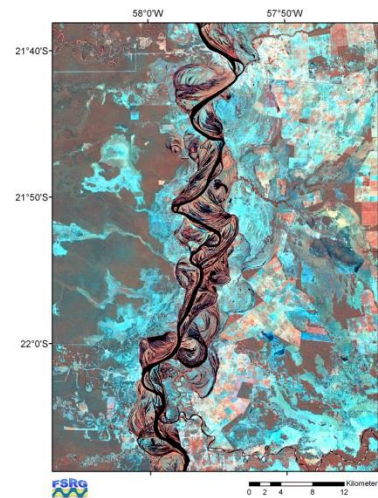
6.00pm for 6.15pm

PREDICTIVE FLUVIAL MODELS: WHY WE NEED THEM AND APPLICATION TO INDUSTRY

Dr Amanda Owen

Lecturer in Earth Sciences at the University of Glasgow

Fluvial systems are inherently heterogeneous and as a result a wide array of deposit characteristics can be present in the geologic record. The need for predictive models is crucial in such instances as they enable common predictive characteristics to be identified, as well as help better understand how changes in major processes can affect the characteristic of deposits. A recent surge in distributive fluvial system (DFS) literature has shown the DFS model is applicable across multiple sedimentary basins of varying tectonic and climatic regimes. However, to date there is a lack of quantified examples of such systems that allows the predictive model to move forward. This talk will explore the system wide trends that are visible in both modern and ancient sedimentary deposits, as well as how uranium deposits can allow insights into the connectivity of channel bodies. At a basin scale, distributive fluvial systems have been shown in modern studies to dominate continental sedimentary basins, yet their role in ancient basin fills has yet to be quantitatively documented. This talk highlights at a variety of scales that while predictive models are crucial in allowing the interpretation of what can often be spatially limited datasets, they must be used with caution, and when the models do not 'fit' the data important insights and steps forward in science can be made.



More information on the Central Scotland Regional Group can be found on our [webpage](#).



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Dr Amanda Owen

Lecturer in Earth Sciences at the University of Glasgow

Amanda graduated from the University of Plymouth with a BSc in Physical Geography and Geology in 2010. Soon afterwards Amanda began a PhD in Applied Sedimentology at Royal Holloway, University of London, during which she undertook an internship with Total E&P. After finishing her PhD in January 2014 Amanda obtained an industry funded Post-doctoral position at the University of Aberdeen which looked to understand the predictability of continental sedimentary basin fills. Since July 2017 Amanda is a Lecturer in Earth Sciences at the University of Glasgow teaching sedimentology, Petroleum Geology, and Sequence Stratigraphy to undergraduate students while continuing to undertake her research into trying to understand the predictability of sedimentary deposits with application to industry exploration and extraction.

