

## CERAMAH TEKNIK TECHNICAL TALK

### Crustal structure and buried paleo-sedimentary basins in the north-eastern Black Sea-Azov Sea area and tectonic implications (DOBRE-2 project)

Randell Stephenson (University of Aberdeen)

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Dr. Randell Stephenson is Professor in Lithosphere Geophysics at University of Aberdeen, Scotland, and Visiting Professor at the Department of Geology, University of Malaya. He was born and educated in Canada. He worked at Australian National University as a postdoctoral fellow, Geological Survey of Canada as a research scientist. He started his academic career at VU University Amsterdam and before joining the School of Geosciences at University of Aberdeen in 2009. Dr. Stephenson presented the talk at the Lecture Hall of the Department of Geology, University of Malaya. The talk was well attended by faculties and graduate students of the Geology Department.



**Abstract:** Sedimentary basin inversion and accompanying ongoing development of marginal basin depocentres in the north-eastern Black Sea – which is closely tied to the formation of the Greater Caucasus orogen – is a Cenozoic phenomenon, starting in the middle Eocene and proceeding until the present day. The DOBRE-2 project was about the crustal structure of the northern margin of the eastern Black Sea basin, north across the Azov Sea onto the East European Craton – the deeper expression of sedimentary basins and what controls the geometry of their inversion, the processes forming syn-inversional basins and the role of inherited lithosphere (crustal) structure. The sedimentary basin/crust/lithosphere geometry of the study area has been characterised across a range of scales using regional seismic reflection profiling, long-offset refraction/wide-angle reflection profiling and local earthquake tomography. These are described, integrated and used as the basis of a new model of tectonic evolution of the area.