



THE CENTRAL SCOTLAND REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Tuesday 29th September 2020
Start Time: 5pm

Online Event, please register using the link below:

<https://us02web.zoom.us/meeting/register/tZUkfumvqD8qGdFEE7L2nBsje1EgGkOsCZ6Y>

(Please do not freely distribute the above link)

3D Visualisation Tools for Geological Models & Geotechnical Engineering



Digital tools and 3D models have been “the future” for a very long time, however it is only recently that the technology has advanced to the point where it is sufficiently accessible and user friendly to warrant widespread adoption by geoscientists. Over the course of the presentation, state-of-the art digital tools for visualising ground information will be discussed, including:

- Geotechnical tools which can utilise LiDAR scans: a computer game style real-time interactive 3D environment where rock anchoring can be visually placed and arranged, with data exported to analysis software for verification.
- An animated 3D timeline showing the geomorphology of a site; from initial bedrock formation, through sedimentary deposition and erosion, to

Registered Charity Number 210161

The Geological Society, Burlington House, Piccadilly, LONDON, W1V 0JU
Tel: 0207 434 9944 Fax: 0207 439 3470 Website: <http://www.geolsoc.org.uk>



THE CENTRAL SCOTLAND REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

- manmade factors affecting the area. This technique can be a powerful aid in communicating complex 4D geological information to clients, stakeholders and the general public.
- A discussion of the existing tools within industry, where they can be augmented by 3D tools, and when a quick hand sketch would suffice!

Speaker

Richard Passe, Civil Engineer, COWI Glasgow



Richard is a civil engineer with an interesting geological background; with a father and brother both geologists, he didn't fall too far from the tree. His interest in game development brought him to the niche field in engineering of computational design and visualisation – skills he's applied from his hobby to become part of his working life.

He has nine years' postgraduate experience in the field of geotechnical engineering throughout the UK, initially with Ravey Consulting as a site engineer specialising in roped access works, then with Donaldson Associates, now COWI UK, as a geotechnical engineer.

Experience has been gained through on-site rock slope inspections and subsequent design of remediation works for highways, railway, hydro-electric and private sector projects. Experience has been gained on site in soil slope engineering, rock slope engineering; site surveys and inspection of earthworks and rock slopes, site supervision of earthworks construction and remedial works.