

## BGA Annual Conference 2020

Tuesday 7th July at 10:00-11:15

**ONLINE**



Due to the COVID-19 pandemic the British Geotechnical Association ANNUAL CONFERENCE 2020 cannot be held as a physical event. Instead it will be held as three ONLINE sessions on:

Tuesday July 7<sup>th</sup> July 10:00-11:15

Tuesday July 14<sup>th</sup> July 10:00-11:15

Tuesday July 21<sup>st</sup> July 10:00-11:15

This flyer provides details for the 7<sup>th</sup> July event.

### **Challenges and opportunities of the next decade and beyond**

**Dr Jonathan Morris, Cementation Skanska**

We are in a period of massive change and technical advances yet the world of construction and of geotechnics in particular has not really caught up. We have virtual meetings, use BIM and finite element tools and techniques and access plant remotely, but a lot of what we do today would be instantly recognisable to a time traveller from the 1960s. In this talk Jonathan will describe the developments he hopes to see in the next ten years and some of the challenges that we will likely encounter along the way.

### **Evolution of design and construction of ground improvement techniques**

**Bob Essler, Managing Director RD Geotech Ltd**

The current version of Eurocode 7 says very little about the design of ground improvement and this has been addressed in the upcoming revised code within Clause 10 of Part 3. The presentation will set out what is required in general for progressing geotechnical design with special reference to ground improvement and will then discuss the detailed design approach for ground improvement set out within Clause 10 of EN1997 Part 3. The presentation will outline the design of the two main families of ground improvement which are Diffused and Discrete and their sub families and discuss the different approach to the design of piles and rigid inclusions which are very similar but have generated a great deal of discussion. The presentation will also outline some statistical methods for assessing ground improvement construction.

### **Response of soils to cyclic wet-dry and freeze-thaw processes**

**Professor Snehasis Tripathy, Cardiff University**

The talk will focus on the relevance of studies related to the impact of seasonal climatic processes on the behaviour of soils in the vadose (unsaturated) zone, particularly in the context of long term climate changes. It will discuss some laboratory investigation approaches and the associated challenges. The presentation will go on to show some recent experimental findings on the volume change behaviour of soils when subjected to wet-freeze-thaw-dry cycles.

## The Speakers

### Dr Jonathan Morris MEng DPhil CEng FICE

Jonathan is Engineering Director of specialist piling and ground engineering contractor Cementation Skanska. Over the past 25 years he has also worked in academia, consultancy and main contracting organisations across a range of disciplines including design, operations and general management. He has a particular interest in complex construction problems and in figuring out how best to set up collaborative teams and organisations to deliver high quality solutions.



### Bob Essler, Managing Director RD Geotech Ltd

Bob has been working in the geotechnical industry since 1974, initially working for Soil Mechanics Ltd for 9 years before moving to the Middle East to work for Bauer on the Bahrain-Saudi Causeway project then for the Bahrain Government responsible for ground investigation and foundation design for government projects. In 1989 he joined Keller in Wetherby and remained there till 2002 when he formed RD Geotech Ltd, a ground improvement consultancy. In October 2017 he was appointed by NEN on behalf of CEN to draft a new clause on ground improvement design as part of the new Eurocode 7. He was also responsible for writing the Ground Treatment chapter for the ICE Manual of Ground Engineering.



### Professor Snehasis Tripathy, Cardiff University

Snehasis Tripathy joined Cardiff University as a lecturer in 2006 and is currently a Professor. His current research areas include unsaturated soil mechanics, nuclear waste disposal and carbon sequestration in coal and rock. He has been an investigator in the EPSRC funded projects SAFE-Barriers dealing with the underground disposal of nuclear waste and CACTUS dealing with developing an understanding of engineered barriers when subjected to extreme weather events and long term climate changes. He has published more than 75 papers in peer reviewed Journals and International conferences and is currently in the Editorial Boards of Geotechnique, Canadian Geotechnical Journal, Journal of Rock Mechanics and Geotechnical Engineering, Indian Geotechnical Journal and Journal of Geomechanics for Energy and the Environment.



## Further Information

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