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Energy Geotechnics

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Preface

The 1st International Conference on Energy Geotechnics (ICEGT 2016) was held from 29th to 31st August 2016, at the University of Kiel, Kiel, Germany. This was the first conference under the guidance of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) TC308 on Energy Geotechnics.

With the increasing energy demand and climate change implications, the development of sustainable energy systems based on integrated schemes of energy production, transport, and transfer as well as energy storage is of the utmost importance. This issue is of increasing interest to the research field of geotechnical engineering. The focus of this relatively new research area is new developments and solutions for civil, environmental, and industrial applications.

The behaviour of geomaterials (i.e. soils and rocks) when subjected to thermo-hydro-mechanical and chemical solicitations is generally very complex. Their response is also strongly influenced by, shape, size and mineralogy of the aggregates, as well as, by the type of loading and porosity. The ability of these materials to store and dissipate energy is of great importance to energy transportation and storage systems. Beside the understanding of the material behaviour, the study and development of energy geo-structure as well the multiphysics interaction behaviour becomes of highest importance too.

The aim of the conference was to provide a wide platform for the interaction among colleagues from different countries working in different subjects, and playing different roles in the energy sector. The discussions focused on past, present and future investigations & practices in the area of energy geotechnics, covering from experimental up to numerical and fundamental studies.

This proceedings consists of 97 peer reviewed papers from engineers and researchers, investigations and reporting from their findings. The editors wish that this proceedings acts as a stack of knowledge for the frontier of Energy Geotechnics.

Frank Wuttke
Chairman of the ICEGT 2016
Head of Geomechanics and Geotechnics
Kiel University

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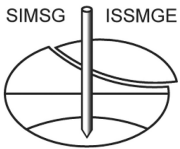
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