



Editorial

# Geotechnics: Welcome to A New Open Access Journal for A Growing Multidisciplinary Community

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On behalf of the editorial board and MDPI Publishing, may we extend a very warm welcome to this first editorial of *Geotechnics*—a new and international, open access, scholarly journal aimed at showcasing and nurturing high-quality research and developmental activities in soil and rock engineering and geo-environmental engineering, worldwide. Ground is a complex domain which is of cardinal importance for both Engineering and the Sciences, including Ground Engineering, Structural Engineer, Hydrology, Geology, Planetary Sciences and Physics. In Engineering, it provides the means for supporting the built environment. It also provides construction materials, defenses against natural disasters and a medium for the flow of water, chemical processes etc. From a civil engineering perspective, Geotechnics is among the oldest engineering disciplines, dating from the Dawn of Civilization.

Through this Open Access and fast track publication vehicle, *Geotechnics* is an ideal platform to publish your high-quality original research papers, rapid communications, technical notes, case histories and state-of-the-art review articles covering all the aspects of modern soil and rock engineering and related disciplines.

Aiming to achieve a balance between research and practice through theory, experiment, computation and application to real world, typical issues of *Geotechnics* may contain contributions focusing on the following topics: soil and rock mechanics; physical, mechanical, hydraulic and thermal properties of geo-materials; field characterization of soils and rock masses; groundwater seepage and permeability in soil and rock masses; soil and rock foundations including piles and pile groups, tunneling, and soil-structure/rock-structure interactions; dams, civil and mining underground structures in soil and rock; underground caverns for storage of nuclear waste and fluids; ground improvement; landslides and soil and rock slope stability; open pit mining; soil dynamics and earthquake engineering (including transmission of construction vibrations); transportation geotechnics (including embankments and pavement engineering applications), geomechanics and mechanics of granular media; soil and rock engineering design and construction issues; dewatering; laboratory and field testing methodologies in soil and rock engineering; monitoring of soil and rock structures using instrumentation in physical models or in the field; and physical and numerical modelling including scaling and similitude. Innovative research and developmental activities pertaining to the rapidly evolving fields of energy geotechnics, offshore geotechnics, environmental geotechnics (including waste and waste management), risk and reliability applications (including cascading hazards) in soil and rock engineering, geo-synthetic materials, blast-related hazards, and extra-terrestrial geotechnics are particularly welcome.



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A major challenge faced by soil and rock engineering practitioners in society today is the need to meet the demand for safe, environmentally friendly designs, constructions and innovations that are sustainable, from economic as well as environmental and societal perspectives that provide high value for money. Further, climate change is a global concern that has resulted in the adoption of novel techniques as well as the increased usage of sustainable materials in soil and rock engineering.

You are encouraged to explore the above topics/themes but, if preferred, are also free to peruse other related subtopics aligned to the generic journal themes. As an example, the ten papers published in the inaugural issue of *Geotechnics* report on a diverse range of topics that begins to demonstrate the wide scope of this new journal. Included in this issue are full-length regular papers and those discussing the state-of-the-art on certain specific areas of interest in the form of review papers, all of which are available free to download and view ([https://www.mdpi.com/search?q=&journal=geotechnics&sort=pubdate&page\\_count=50](https://www.mdpi.com/search?q=&journal=geotechnics&sort=pubdate&page_count=50)).

In addition to individual articles, the journal aims to publish many special issues to create collections of papers dedicated to the synthesis of important and timely topics in the soil and rock engineering and geo-environmental engineering arenas, including case histories. Presently, for instance, there are Open Calls for special issues on emerging trends in sustainable soil stabilization techniques, fundamental challenges for civil infrastructures in problematic and unsaturated soils, and soil–water–structure interaction.

The advantages of high-quality rapid and effective publication of Open Access scholarly journal articles in *Geotechnics* are clear by comparison with the lengthier processes of the major printed subscriber journals. Once a manuscript is accepted for publication in *Geotechnics*, the page-numbered final version of record can be prepared for online publication more rapidly than most print journal formats and, hence, it does not require that an issue be “filled” before publication actually occurs. The result is that your research will be published faster and, thanks to the ability to reach many readers via unrestricted online access, your research will be widely circulated within the scientific community and among other interested readers and stakeholders. As well as strengthening communication within the scientific community, and beyond, this enables authors and researchers to cite the latest authoritative research and practical papers and to recover some of the immediacy of research and sharing of new ideas and innovative methods and technologies in our science. All of these factors indicate that the long-term impact of *Geotechnics* will be high.

All articles submitted to the journal will undergo rigorous peer review, based on initial editor screening and blind peer review by independent experts. Similar to most Open Access journals, the cost of publication in *Geotechnics* will be paid by the authors or their institutes.

*Geotechnics* has been championed by MDPI Publishing. With the help of their dedicated and efficient publishing staff, and an eminent international editorial board featuring global leaders in the fields of soil and rock engineering and geo-environmental engineering, as can be observed on the journal’s website, we are all focused on making this newcomer a premier publication outlet for high quality, leading-edge research in these broad and diverse arenas. This goal, of course, will also be dependent upon the readership and potential authors. Therefore, we cordially invite potential authors from all over the world to submit their original, high-quality research papers, technical notes, and comprehensive review articles related to soil and rock engineering and geo-environmental engineering, interpreted in a broad sense. Submissions can be made online at <https://www.mdpi.com/journal/geotechnics>. We hope you enjoy the new journal!

**Conflicts of Interest:** The author declares no conflict of interest.

## Short Biography of Authors



**Dr. Brendan O'Kelly** has almost 30 years of experience in geotechnical and geoenvironmental engineering research and practice. He earned his PhD on the topic of Development of a New Apparatus for Hollow Cylinder Testing under Generalized Stress Conditions. He is a Chartered Engineer and Chartered Environmentalist (ICE, UK) and is a Fellow of Trinity College Dublin, his home university. His main research interests are soil consistency limits, ground improvement, geotechnics of water- and wastewater-treatment sludges, and the geomechanical behavior/properties of peat and other highly organic soils, on which he has published more than 100 refereed journal articles.



**Prof. Kulatilake** is an Academic Director and a Distinguished Professor of Rock Mechanics and Rock Engineering at the Jiangxi University of Science and Technology, China, and a Professor Emeritus at the University of Arizona. He has over 40 years of experience in rock mechanics & rock engineering and applications of probabilistic, statistical, and numerical methods to geo and mining engineering. His papers have received over 5706 citations with i10 index of 94 and H-index of 42. He has delivered over 40 keynote lectures and over 50 other invited lectures throughout the world. He has taught 56 short courses covering all six continents. He has won numerous prestigious awards. He has served over 20 years as the main examiner for the geological engineering professional exam conducted by the Arizona State Board of Technical Registration.



**Prof. Kulatilake** is Professor and Chair in Geotechnics and Soil-Structure Interaction at the University of Bristol, U.K. He holds a 5-year Diploma Degree in Civil Engineering from NTUA, Greece (1993) and a PhD in Geotechnical & Earthquake Engineering from SUNY-Buffalo (1996). He is recipient of the Prakash International Research Award (2002) and a nominee for the Best Paper Award by the Japanese Geotechnical Society (2002). He has served as Guest Editor and/or Editorial Board Member in a number of International Journals including JGGE, SDEE and Géotechnique. He has been Principal Investigator in more than 25 funded research projects funded by NSF, EU and the private sector, and supervised/co-supervised more than 25 PhD Dissertations. He has authored over 300 technical articles (including about 100 in refereed Journals) which have attracted over 5000 citations by independent researchers. He has delivered over 70 invited talks around the world. He holds academic appointments at UoB, Khalifa University and UCLA. Since 2021 he has been founding Editor-in-Chief, in the MDPI Journal *Geotechnics*.