

Special Issue

Advancements in Lunar and Martian Soil Mechanics: Reliability of Simulants and Implications for Design

Message from the Guest Editor

This Special Issue of *Applied Sciences* aims at collecting new theoretical, experimental and numerical studies in the field of the lunar soil mechanics. The construction of a human habitat on the Moon, a permanent lunar base, will require increasing research related to the reliability of the lunar simulants when deducing mechanical parameters for the design. It is well known that the main difference between the real lunar soils and the simulants is the formation environment: thermal and dynamic stresses and vacuum on the moon should involve important effects on the regolith mechanical properties, which are difficult to reproduce on Earth. In this respect, a lunar simulant, once created, should be subjected to suitable disturbance in order to acquire a more reliable soil structure and, therefore, to allow good performance of the geotechnical design. The topic is characterized by strong interplay between physics and geotechnics; therefore, relevant contributions for this Special Issue are expected from researchers of both fields.

Guest Editor

Prof. Dr. Francesco Cafaro

Department of Civil, Environmental, Territorial, Building Engineering and Chemistry (DICATECh), Polytechnic University of Bari, Bari, Italy

Deadline for manuscript submissions

closed (30 April 2023)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/79252

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/

[applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)