

Special Issue

Multi-Physics Phenomena in Geomaterials

Message from the Guest Editors

A deep understanding of phenomena involving geomaterials is generally challenging due to the coexistence of several constituents and phases, their multi-physical nature, and complex and non-linear material behaviour. Multi-physics phenomena, to be fully resolved, require the participation of several scientific disciplines. This Special Issue invites researchers to contribute with original papers highlighting the importance of a multi-physics approach to address phenomena dealing with geomaterials in the following application fields:

- Environmental protection;
- Geotechnical and geo-environmental systems;
- Engineering geology.

Examples of the physical processes that this Special Issue aims to address are as follows: hydraulic transport (pore fluid movement in single or multi-phase conditions), mechanical response (stress and strain, settlements, failure conditions, symmetric and asymmetric crack propagation modes), thermal effects (thermal expansion or contraction, phase changes) and chemical reactions. The contributions can be experimental, numerical, or theoretical, emphasizing coupling the various physical processes and/or approaches.

Guest Editors

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Deadline for manuscript submissions

closed (28 February 2023)



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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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