Special Issue

Integration of Methods in Applied Geophysics

Message from the Guest Editors

Interpretation in geophysics is commonly done using a single geophysical dataset to obtain an image of a single geophysical parameter. In principle, only an effective integration of the different information can provide an unambiguous and self-constrained interpretative model. In this way, the effectiveness of individual geophysical methods can be enhanced to jointly determine the buried structures by their multiple physical properties. The formalization of this inverse problem therefore requires a joint representation and parametrization of the different media properties in the model. In practice, the question of how to correctly manage multiple data sets invokes the search for well-defined a priori relationships between them. This is an extraordinary and challenging problem due to the high range of variability of chemical and physical conditions within the Earth.

This Special Issue invites researchers in applied geophysics to provide contributions on: (1) innovative theoretical developments for the formalization of the joint inverse problem of different geophysical parameters; and (2) case studies of integrated geophysics in different fields of application.

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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.

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