Special Issue

Machine Learning Approaches for Seismic Data Analysis

Message from the Guest Editors

Topics covered include automatic earthquake detection systems, real-time monitoring methods, earthquake forecasting both for strong earthquakes and within seismic clusters, approaches to noise reduction and seismic signal enhancement. In addition, this Special Issue discusses novel architectures such as convolutional neural networks and recurrent neural networks that can be used to capture complicated patterns in seismic data and, conversely, perform robust analysis when only limited data are available, with techniques used to avoid overfitting. Research studies that explore the effectiveness of machine learning approaches applied to different types of seismicity for improving the interpretation of geological features, such as fault detection or fluid movement in volcanic and non-volcanic environments, are also welcome. Suggested themes and article types for submissions:

- Waveform picking and earthquake location;
- Automatic clustering of seismic data;
- Earthquake and artificial signal discrimination;
- Earthquake forecasting;
- Earthquake magnitude forecasting for early warning;
- Integration of seismic and non-seismic data in earthquake forecasting.

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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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