



Applied Sciences

an Open Access Journal by MDPI

CiteScore: 6.1

Impact Factor: 2.9

Special Issue Reprint

Intelligent Technologies in Geotechnical Engineering and Geological Hazards

Edited by: Yongsheng Zhou

This Special Issue focuses on progress in intelligent technology in geotechnical engineering and geological and earthquake hazards. This Special Issue brings together 13 contributions. The topics covered ground motion and earthquake hazards, geotechnical engineering and landslides, geochemical surveys, experiments and simulations in rock mechanics and rock physics and the implications on earthquake mechanisms and geoengineering. The contributions to this Special Issue can be organized into five main thematic clusters. The first cluster concerns earthquake hazards. This includes seismic hazard prediction and pre-event estimation, as well as peak ground acceleration estimates for vertical and horizontal ground motion with 4 papers. The second cluster focuses on geotechnical engineering. Three papers apply deep machine learning to landslide displacement prediction, TBM penetration rate prediction during tunnel excavation, and the simulation of post-grouted piles in railway bridges. The third cluster addresses geochemical surveys. This concern is particularly evident in the two contributions on chemical pollution of soils, and the element migration of mineralization-alteration zones. The fourth cluster relates to rock mechanics and earthquake mechanisms. Two papers covered frictional experiments and field deformation on granitic faults, and the implications for seismic processes. The fifth cluster shows rock physics experiments in geoengineering. Two papers reported on thermal damage in granite based on machine learning and experimental data and radiation exposure experiments of building materials.



<https://www.mdpi.com/books/reprint/13358>