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Collana	Sustainable Civil Infrastructures, , 2366-3405
Disciplina	631.40287
Soggetti	Geotechnical engineering Engineering geology Engineering—Geology Foundations Hydraulics Buildings—Design and construction Building Construction Engineering, Architectural Engineering design Geotechnical Engineering & Applied Earth Sciences Geoengineering, Foundations, Hydraulics Building Construction and Design Engineering Design
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Influence of chemical additives and flyash on the swelling and bearing resistance of expansive subgrade -- 2 characterization of unsaturated shrink-swell soils properties in Egypt -- 3 strength property of expansive soils treated with bagasse ash and lime -- 4 stabilization of an expansive soil using alkali activated fly ash based

geopolymer -- 5 determination of shrinkage properties of clayey soils by the image analysis technique. .

Sommario/riassunto

This volume includes a collection of technical papers covering two important research topics in geotechnical engineering: (1) the behavior and treatment of expansive soils, and (2) the characterization of rock properties. The twelve studies on expansive soils include investigations into novel stabilization techniques for expansive soils using different admixtures or mechanical consolidation techniques, as well as new experimental approaches to evaluate the behavior of expansive soils. They also include an evaluation of wetting boundary conditions on the volume change of expansive soils, as well as the role of hydrologic boundary conditions in arid climates. The four studies on rock properties include thermo-hydro-mechanical behavior of gypsum rock, role of rock strength in blastability, indirect methods to estimate rock strength, and variations in isotope distributions in Permian rocks. The two broad themes in this collection, as summarized above, are representative of local challenges facing geotechnical engineers in the Middle East, but their contributions can also be extended to other regions of the world. This volume is part of the proceedings of the 1st GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2017.
