

1. Record Nr.	UNINA9910720058303321
Autore	Kolditz Olaf
Titolo	GeomInt--Discontinuities in Geosystems from Lab to Field Scale
Pubbl/distr/stampa	Cham : , : Springer, , 2023 ©2023
ISBN	3-031-26493-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (107 pages)
Collana	SpringerBriefs in Earth System Sciences Series
Altri autori (Persone)	YoshiokaKeita CajuhiTuanny GüntherRalf-Michael SteebHolger WuttkeFrank NagelThomas
Disciplina	070.573
Soggetti	Electronic books
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Introduction to GeomInt -- 2. Hydro-mechanical effects in Opalinus clay -- 3. Pressure-driven percolation in Salt Rock -- 4. Stress redistribution -- 5. Virtual reality and computation.
Sommario/riassunto	This is an open access book. In view of growing conflicts over strategic georesources, the use of the geological subsurface in the sense of a regional resource is becoming increasingly important. In this context, georeservoirs are playing an important role for the energy transition not only as a source of energy but also as a storage facility and deep geological disposal for energy waste. The success of the energy transition also depends to a large extent on the efficient and safe use of underground resources. This book complements the previous basic book (GeomInt -- Integrity of Host Rocks) with a series of application examples in different rock formations, clay, salt, and crystalline. The methodology developed in GeomInt is used, among others, in the Mont Terri underground research laboratory (Opalinus Clay), in the large borehole test in Springen (salt rock) and in the "Reiche Zeche" teaching and research mine (crystalline rock). In addition, new methodological developments are also taken up in experiments and models and

embedded in workflows for geotechnical system analyses. The present book summarizes the results of the collaborative project "GeomInt2: Geomechanical integrity of host and barrier rocks - experiment, modeling and analysis of discontinuities" within the program: Geo Research for Sustainability (GEO: N) of the Federal Ministry of Education and Research (BMBF).
