Record Nr. UNINA9910162858003321 Autore Aydan mer Titolo Time-dependency in rock mechanics and rock engineering / / mer Aydan, Department of Civil Engineering and Architecture, University of the Ryukyus, Nishihara, Okinawa, Japan Leiden, The Netherlands:,: CRC Press/Balkema,, [2017] Pubbl/distr/stampa ©2017 **ISBN** 1-315-34975-2 1-315-37515-X 1-4987-7700-7 Edizione [1st ed.] Descrizione fisica 1 online resource (260 pages) **ISRM Book Series** Collana Disciplina 624.1/5132 Soggetti Rock mechanics Water-rock interaction Radioactive waste disposal in the ground - Environmental aspects Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali A Balkema Book. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1. Introduction -- 2. Time-dependent (rate-dependent) behaviour of rocks -- 3. Water migration in soft rocks and its effects on the response of rock structures -- 4. Thermo-mechanical behaviour of rocks and heat transport in rocks -- 5. Hydromechanics of rocks and rock engineering structures -- 6. Thermo-hyrdo-diffusion behaviour of rocks -- 7. Thermo-hyrdo-mechanical behaviour of rocks -- 8. Conclusions. Sommario/riassunto This book is concerned with time-dependency in rock mechanics and rock engineering, whose spectrum is very wide. While the term "timedependency" involves time-dependent behavior/rate-dependent behavior of rocks in a conventional sense, this books attempts to cover the spectrum as much as possible including coupled processes of thermal, hydrological and diffusions in rocks. It presents theoretical formulations, experiments, numerical formulation and examples of applications. Of paramount concern is the long-term response and

> stability of rock engineering structures, including for instance manmade and natural slopes and underground facilities such as tunnels