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Titolo	Stability, failure, and measurements of boreholes and other circular openings / / U.S. National Committee for Rock Mechanics, Geotechnical Board, Commission on Engineering and Technical Systems, National Research Council
Pubbl/distr/stampa	Washington, DC : , : National Academy Press, , 1993
Descrizione fisica	1 online resource (x, 92 pages) : illustrations
Altri autori (Persone)	RoegiersJean-Claude
Disciplina	622.24
Soggetti	Borehole mining Boring
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Panel on Borehole Stability." Panel chairman: Jean-Claude Roegiers.
Nota di contenuto	""Stability, Failure, and Measurements of Boreholes and Other Circular Openings""; ""Copyright""; ""Contents""; ""EXECUTIVE SUMMARY""; ""INTRODUCTION""; ""FAILURE""; ""ABNORMAL STABILITY""; ""1 EXCAVATION, MAINTENANCE, AND PERFORMANCE""; ""BEFORE THE EXCAVATION""; ""DURING EXCAVATION""; ""UNSUPPORTED OPENINGS""; ""CHANGE IN STRESSES""; ""CHANGE IN STRENGTH""; ""DECREASE IN SUPPORT CAPACITY""; ""SUPPORTED OPENINGS""; ""HOLE COLLAPSE""; ""INSUFFICIENT BONDING""; ""FORMATION DAMAGE""; ""LONG-TERM STABILITY""; ""2 OBSERVATIONAL EVIDENCE""; ""FIELD OBSERVATIONS""; ""LABORATORY OBSERVATIONS"" ""3 STABILITY ASSESSMENT""" "CLOSURE MEASUREMENTS""; ""GEOPHYSICAL MEASUREMENTS""; ""IN-SITU STRESS CONDITIONS""; ""CIVIL AND MINING ENGINEERING""; ""4 ROCK-MASS ASSESSMENT""; ""SCALE OF INVESTIGATION AND RESOLUTION""; ""MECHANICAL PROPERTIES AND THE STABILITY OF THE OPENINGS""; ""PRIMARY FACTORS AFFECTING THE REMOTE ASSESSMENT OF ROCK-MASS PROPERTIES""; ""HIGH-RESOLUTION SURFACE SOUNDING""; ""SEISMIC METHODS""; ""ELECTRICAL RESISTIVITY SOUNDING""; ""RADAR SOUNDING AND RADAR TOMOGRAPHY""; ""ROCK-MASS EXPLORATION BY MEANS OF PILOT BOREHOLES""; ""MEASUREMENT-WHILE-DRILLING

		(MWD)"" ""5 ANALYTICAL AND NUMERICAL MODELING"" ""UNSUPPORTED OPENINGS""; ""ELASTIC ANALYSIS""; ""INELASTIC ANALYSIS""; ""SIMPLIFIED BIFURCATION ANALYSIS""; ""ISOTROPIC FAR-FIELD STRESSES""; ""NUMERICAL ANALYSIS OF LOCALIZATION PHENOMENA IN DEEP BOREHOLES""; ""NONLINEAR EFFECTS""; ""TIME-DEPENDENT EFFECTS""; ""SCALE EFFECTS""; ""SUPPORTED OPENINGS""; ""ELASTIC ANALYSIS""; ""NONLINEAR OR TIME-DEPENDENT ANALYSIS""; ""INTERSECTIONS""; ""SLABBING AND EXFOLIATION""; ""INFLUENCE OF PREEXISTING DISCONTINUITIES OR STRUCTURE""; ""DISCRETE ELEMENT METHOD""; ""BLOCK THEORY""; ""DISCONTINUOUS DEFORMATION ANALYSIS""; ""6 CONCLUSIONS""; ""REFERENCES""
2.	Record Nr.	UNINA9910963109303321
	Autore	Alexakis Spyros <1978->
	Titolo	The decomposition of global conformal invariants / / Spyros Alexakis
	Pubbl/distr/stampa	Princeton, : Princeton University Press, 2012
	ISBN	9786613589521 9781280494291 1280494298 9781400842728 1400842727
	Edizione	[Course Book]
	Descrizione fisica	1 online resource (460 p.)
	Collana	Annals of mathematics studies ; ; no. 182
	Disciplina	518
	Soggetti	Conformal invariants Decomposition (Mathematics)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Front matter -- Contents -- Acknowledgments -- 1. Introduction -- 2. An Iterative Decomposition of Global Conformal Invariants: The First Step -- 3. The Second Step: The Fefferman-Graham Ambient Metric and the Nature of the Decomposition -- 4. A Result on the Structure of Local Riemannian Invariants: The Fundamental Proposition -- 5. The Inductive Step of the Fundamental Proposition: The Simpler Cases -- 6.

Sommario/riassunto

This book addresses a basic question in differential geometry that was first considered by physicists Stanley Deser and Adam Schwimmer in 1993 in their study of conformal anomalies. The question concerns conformally invariant functionals on the space of Riemannian metrics over a given manifold. These functionals act on a metric by first constructing a Riemannian scalar out of it, and then integrating this scalar over the manifold. Suppose this integral remains invariant under conformal re-scalings of the underlying metric. What information can one then deduce about the Riemannian scalar? Deser and Schwimmer asserted that the Riemannian scalar must be a linear combination of three obvious candidates, each of which clearly satisfies the required property: a local conformal invariant, a divergence of a Riemannian vector field, and the Chern-Gauss-Bonnet integrand. This book provides a proof of this conjecture. The result itself sheds light on the algebraic structure of conformal anomalies, which appear in many settings in theoretical physics. It also clarifies the geometric significance of the renormalized volume of asymptotically hyperbolic Einstein manifolds. The methods introduced here make an interesting connection between algebraic properties of local invariants--such as the classical Riemannian invariants and the more recently studied conformal invariants--and the study of global invariants, in this case conformally invariant integrals. Key tools used to establish this connection include the Fefferman-Graham ambient metric and the author's super divergence formula.