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| 1. Record Nr. | UNINA9910139520603321 |
| Titolo | Constitutive modeling of soils and rocks [[electronic resource] /] / edited by Pierre-Yves Hicher, Jian-Fu Shao |
| Pubbl/distr/stampa | London, : ISTE Hoboken, NJ, : John Wiley & Sons, 2008 |
| ISBN | 1-282-25384-0 9786613814494 0-470-61108-1 0-470-39366-1 |
| Descrizione fisica | 1 online resource (457 p.) |
| Collana | ISTE |
| Altri autori (Persone) | HicherPierre-Yves ShaoJian-Fu |
| Disciplina | 624.1/51015118 624.1513 |
| Soggetti | Engineering geology - Mathematical models Soil mechanics - Mathematical models Electronic books. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | "First published in France in 2002 by Hermes Science/Lavoisier entitled 'Modeles de comportement des sols et des roches' ... " --T.p. verso. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Constitutive Modeling of Soils and Rocks; Table of Contents; Preface to the English Edition; Preface to the French; Chapter 1. The Main Classes of Constitutive Relations; 1.1. Introduction; 1.2. The rheological functional; 1.3. Incremental formulation of constitutive relations; 1.4. Rate-independent materials; 1.4.1. Non-linearity of G and H; 1.4.2. Anisotropy of G and H; 1.4.3. Homogeneity of degree 1 of G and H; 1.5. Notion of tensorial zones; 1.6. The main classes of rate-independent constitutive relations; 1.6.1. Constitutive relations with one tensorial zone 1.6.2. Constitutive relations with two tensorial zones1.6.3. Constitutive relations with four tensorial zones; 1.6.4. Constitutive relations with n tensorial zones (n > 4); 1.6.5. Constitutive relations with an infinite number of tensorial zones; 1.6.6. Conclusion; 1.7. The main constitutive relations for rate-dependent materials; 1.7.1. First class of |

incremental strain decomposition; 1.7.2. Second class of incremental strain decomposition; 1.8. General conclusions; 1.9. References; Chapter 2. Mechanisms of Soil Deformation; 2.1. Introduction; 2.2. Remolded soil behavior
2.3. Relationships between discontinuous and continuous medium
2.3.1. Granular materials; 2.3.2. Remolded clayey materials; 2.3.3. Granular materials with intergranular glue; 2.4. Natural soils; 2.5. Conclusion; 2.6. References; Chapter 3. Elastoplastic Modeling of Soils: Monotonous Loadings; 3.1. Introduction; 3.2. Elastoplasticity equations; 3.2.1. Basic concepts; 3.2.2. Yield surface and elastic domain; 3.2.3. Plastic flow rule; 3.2.4. Incremental relations for one plastic mechanism model; 3.2.5. Incremental relationships for multi-mechanism elastoplasticity
3.3. Constitutive laws and laboratory tests
3.4. Characterization of natural cohesive soil behavior; 3.4.1. Analysis of triaxial test results; 3.4.2. Analysis of oedometer tests; 3.4.3. Elasto-viscoplasticity or elastoplasticity?; 3.5. Characterization of frictional soil behavior; 3.5.1. Analysis of triaxial test results; 3.5.2. Elastoplasticity framework for frictional soils; 3.6. Principles for the derivation of elastoplastic models; 3.6.1. Elastic behavior; 3.6.2. Estimation of the plastic behavior; 3.6.3. Failure surface; 3.6.4. Total and plastic strains; 3.6.5. Plastic potential
3.6.6. Yield surface
3.7. Three-dimensional aspect of the models and calculation of geotechnical works; 3.8. Examples of perfect elastoplastic models; 3.8.1. The Mohr-Coulomb model; 3.8.2. The Drucker-Prager model; 3.9. Examples of elastoplastic models with hardening; 3.9.1. University of Cambridge models (Cam-Clay models); 3.9.2. Nova model (1982 version); 3.9.3. Melanie model; 3.10. Conclusions; 3.11. Notations; 3.12. References; Chapter 4. Elastoplastic Modeling of Soils: Cyclic Loading; 4.1. Soil behavior under drained loading; 4.1.1. Isotropic and oedometric cyclic loading
4.1.2. Cyclic triaxial loading

Sommario/riassunto

This title provides a comprehensive overview of elastoplasticity relating to soil and rocks. Following a general outline of the models of behavior and their internal structure, each chapter develops a different area of this subject relating to the author's particular expertise. The first half of the book concentrates on the elastoplasticity of soft soils and rocks, while the second half examines that of hard soils and rocks.

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| 2. Record Nr. | UNINA9910959866003321 |
| Autore | Merna Tony |
| Titolo | Project finance in construction : a structured guide to assessment / / Anthony Merna, Yang Chu, Faisal Al-Thani |
| Pubbl/distr/stampa | Ames, Iowa, : Blackwell, 2010 |
| ISBN | 9786612643316 9781282643314 1282643312 9781444323849 1444323849 |
| Edizione | [1st ed.] |
| Descrizione fisica | 1 online resource (194 p.) |
| Altri autori (Persone) | ZhuYang Al-ThaniFaisal F |
| Disciplina | 624.068/1 |
| Soggetti | Infrastructure (Economics) - Finance Industrial development projects Risk management Public-private sector cooperation |
| 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 | Project Finance inConstruction; Contents; List of illustrations; List of tables; About the Authors; Preface; 1 Introduction; 1.1 The development of project finance; 1.2 Financial assessment; What is financial assessment?; Why perform a financial assessment?; Who is involved in the risk assessment process?; Where should a financial assessment be performed?; When should a financial assessment be performed?; What data are to be used?; How should assessment outputs be presented?; 1.3 Purpose of this guide; 1.4 Scope of the guide; 2 Project finance; 2.1 Introduction 2.2 Definition of project finance2.3 The key characteristics of project finance; Special project/purpose vehicle; Contractual arrangement; Non-/limited recourse; Off-balance sheet transaction; Robust income stream of the project as the basis for financing; 2.4 Legal and financial considerations in project finance; Legal; Financial; 3 Financial instruments and cash flow modelling; 3.1 Introduction; 3.2 Debt |

finance; Senior debt; 3.3 Mezzanine finance; Subordinate debt; Bond finance; 3.4 Equity finance; 3.5 Sources of debt and equity; 3.6 Cash flow modelling and project financing
4 Risk management 4.1 Introduction; 4.2 Risk; 4.3 Risk management process; Risk identification; Risk analysis; Risk response; 4.4 Typical risks in project financing; 5 The financial assessment process; 5.1 Introduction; 5.2 The financial assessment structure; SPV assessment; Lenders' assessment; SPV and lender final assessment; 6 Case study; 6.1 Introduction; 6.2 Independent power project; 6.3 Supply and offtake contracts; Supply contracts; Offtake contracts; Applications of supply and offtake contracts; 6.4 Assumptions for initial assessment; 7 Developing the base case model; 7.1 Introduction
7.2 SPV's initial assessment 7.3 Identify the estimated activities, time, costs and revenues of the project; 7.4 Development of the base case model; 7.5 Identify major project risks; 7.6 Assessment of base case model incorporating risks; 8 Initial economic assessment by lenders; 8.1 Introduction; 8.2 Financial package assessment; Finance package (1); Finance package (2); Finance package (3); 8.3 Conclusions; 9 Financial engineering; 9.1 Introduction; 9.2 Financial instruments used in financial engineering; Forward rates; Financial futures; Swaps; Options
Caps, floors, collars, swaptions and compound options Asset-backed securities; 9.3 Refinancing; 9.4 Reappraising public-private partnerships; 9.5 Techniques applied in the reappraisal of PPP concession agreement; 9.6 Other financial engineering techniques; 10 Final assessment to determine project commercial viability; 10.1 Introduction; 10.2 Detailed risk assessment; 10.3 Financial engineering; Tax holiday; Financial collar; Extending the concession; Increasing debt; Grace period; Phasing construction and operation; Upfront payments; Existing concession revenues; 10.4 Summary
11 Financial close

Sommario/riassunto

Project finance has spread worldwide and includes numerous industrial projects from power stations and waste-disposal plants to telecommunication facilities, bridges, tunnels, railway networks, and now also the building of hospitals, education facilities, government accommodation and tourist facilities. Despite financial assessment of PF projects being fundamental to the lender's decision, there is little understanding of how the use of finance is perceived by individual stakeholders; why and how a financial assessment is performed; who should be involved; where and when it should be performed
