The first book to focus on risk and uncertainty in ground conditions, *Rock engineering* explains the geological principles and concepts required for successful geotechnical design and engineering of underground excavations.

With over 80 years combined experience, the authors use their unique practical and theoretical knowledge of rock engineering to provide the reader with an understanding of how to work with the inevitable uncertainties in ground conditions when planning and constructing tunnels and underground projects. Guidance is given on how these uncertainties should be considered in the selection of design tools and how modern information-based systems, such as observational method and dualistic quality control, can be used to deal with unknown conditions during construction.

**Includes:**
- The application of geological principles in rock engineering
- Strategies for investigating ground conditions
- Methods for detecting and analysing risks
- Using investigation results to select appropriate design tools
- Strategies and systems for handling uncertainties during construction

*Rock engineering* is the essential, internationally applicable, practical guide for engineers and geologists who need to consider ground conditions on underground projects. An informative resource for clients, consultants and contractors hoping to understand the risk and uncertainties that can affect the project, this book is also a valuable reference for advanced students on rock engineering and engineering geology courses.

To learn more, see the [Table of contents](#) and the [Layout of the book](#)