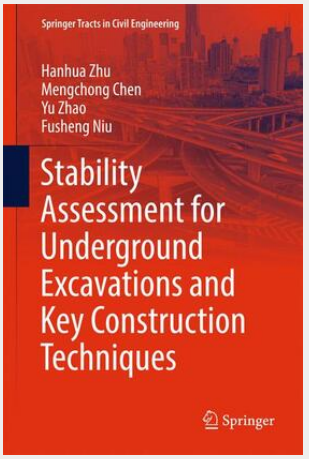
Zhu / Niu / Chen

# Stability Assessment for Underground Excavations and Key Construction Techniques




This book examines how the state of underground structures can be determined with the assistance of force, deformation and energy. It then analyzes mechanized shield methods, the New Austrian tunneling method (NATM) and conventional methods from this new perspective. The book gathers a wealth of cases reflecting the experiences of practitioners and administrators alike. Based on statistical and engineering studies of these cases, as well as lab and field experiments, it develops a stability assessment approach incorporating a stable equilibrium, which enables engineers to keep the structure and surrounding rocks safe as long as the stable equilibrium and deformation compliance are maintained. The book illustrates the implementation of the method in various tunneling contexts, including soil-rock mixed strata, tunneling beneath operating roads, underwater tunnels, and tunnel pit excavation. It offers a valuable guide for researchers, designers and engineers, especially those who are seeking to understand the underlying principles of underground excavation.

This book examines how the state of underground structures can be determined with the assistance of force, deformation and energy. It then analyzes mechanized shield methods, the New Austrian tunneling method (NATM) and conventional methods from this new perspective. The book gathers a wealth of cases reflecting the experiences of practitioners and administrators alike. Based on statistical and engineering studies of these cases, as well as lab and field experiments, it develops a stability assessment approach incorporating a stable equilibrium, which enables engineers to keep the structure and surrounding rocks safe as long as the stable equilibrium and deformation compliance are maintained. The book illustrates the implementation of the method in various tunneling contexts, including soil-rock mixed strata, tunneling beneath operating roads, underwater tunnels, and tunnel pit excavation. It offers a valuable guide for researchers, designers and engineers, especially those who are seeking to understand the underlying principles of underground excavation.

**106,99 €**
99,99 € (zzgl. MwSt.)

*Lieferfrist: bis zu 10 Tage*

**Artikelnummer:** 9789811030109
**Medium:** Buch
**ISBN:** 978-981-10-3010-9
**Verlag:** Springer Nature Singapore
**Erscheinungstermin:** 10.11.2016
**Sprache(n):** Englisch
**Auflage:** 1. Auflage 2017
**Serie:** Springer Tracts in Civil Engineering
**Produktform:** Gebunden
**Gewicht:** 3908 g
**Seiten:** 157
**Format (B x H):** 160 x 241 mm