1. Record Nr. UNINA9910983071903321 Autore Lei Sheng-Xiang Titolo Safety Risk Assessment of Urban Underground Large Space Construction / / by Sheng-Xiang Lei, Zhong-Sheng Tan, Ming-Li Huang, Zheng-Quan Ding, Ke Lei Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 9789819774371 9819774373 Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (XVIII, 574 p. 265 illus., 228 illus. in color.) 690.06 Disciplina Soggetti Construction industry - Management Buildings - Repair and reconstruction **Buildings - Maintenance** Buildings - Design and construction Construction Management **Building Repair and Maintenance Building Construction and Design** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1 Introduction -- Chapter 2 Definition of Urban Large Nota di contenuto Underground Space -- Chapter 3 Analysis of Safety Accidents in Urban Underground Space Construction -- Chapter 4 Basic Theory of Safety Risk Assessment for Urban Large Underground Space Construction --Chapter 5 Coupling Mechanism of Construction Safety Risk in Urban large underground space -- Chapter 6 Dynamic Evolution Mechanism of Safety Risks in Urban Underground Space Construction -- Chapter 7 Dynamic Assessment System for Safety Risks in Urban Large Underground Space Construction -- Chapter 8 Summary and Outlook. Sommario/riassunto This monograph aims to provide theoretical and technical support for construction safety risk assessment in the construction of urban underground large space, since high construction risks and safety accidents frequently occurs in the current development of complex underground spaces in urban areas. The author's team completes the

statistical analysis on a large number of typical engineering instances

and related accident cases, and proposes the definition of "urban underground large space" and corresponding risk analysis methods. This book starts with analyzing the safety risk characteristics during construction period of urban underground large spaces and establishes a coupling evolution analysis model, then proposes an index system and the quantitative criterion for construction safety risk assessment in urban underground large space, and lastly constructs a dynamic evaluation system on construction safety risk. The book will be an valuable reference for professional engineers, researchers, teachers, and students with an interest in the construction and management of underground spaces. The basis of English translation of this book, originally in Chinese, was facilitated by artificial intelligence. The content was later revised by the authors for accuracy.