1. Record Nr. UNINA9910483423303321 Autore Armaghani Danial Jahed Titolo Applications of Artificial Intelligence in Tunnelling and Underground Space Technology / / by Danial Jahed Armaghani, Aydin Azizi Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2021 Pubbl/distr/stampa 981-16-1034-7 **ISBN** Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (IX, 70 p. 16 illus., 15 illus. in color.) Collana SpringerBriefs in Applied Sciences and Technology, , 2191-5318 Disciplina 622.028 Soggetti Engineering geology Statistical physics Geotechnical engineering Mathematical statistics Manufactures **Engineering mathematics** Geoengineering Statistical Physics Geotechnical Engineering and Applied Earth Sciences **Mathematical Statistics** Machines, Tools, Processes **Engineering Mathematics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1. An Overview of Field Classifications to Evaluate Tunnel Boring Machine Performance -- Chapter 2. Empirical, Statistical and Intelligent Techniques for TBM Performance Prediction. Chapter 3. Developing Statistical Models for Solving Tunnel Boring Machine Performance Problem -- Chapter 4. A Comparative Study of Artificial Intelligence Techniques to Estimate TBM Performance in Various Weathering Zones. This book covers the tunnel boring machine (TBM) performance Sommario/riassunto classifications, empirical models, statistical and intelligent-based techniques which have been applied and introduced by the researchers in this field. In addition, a critical review of the available TBM

performance predictive models will be discussed in details. Then, this book introduces several predictive models i.e., statistical and intelligent techniques which are applicable, powerful and easy to implement, in estimating TBM performance parameters. The introduced models are accurate enough and they can be used for prediction of TBM performance in practice before designing TBMs.