

1. Record Nr.	UNINA9910254198803321
Titolo	Holistic Simulation of Geotechnical Installation Processes : Benchmarks and Simulations // edited by Theodoros Triantafyllidis
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer , , 2016
ISBN	3-319-23159-6
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (255 p.)
Collana	Lecture Notes in Applied and Computational Mechanics, , 1613-7736 ; ; 80
Disciplina	624.151
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Geotechnical engineering Mechanics Mechanics, Applied Geoengineering, Foundations, Hydraulics Geotechnical Engineering & Applied Earth Sciences Solid Mechanics
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 at the end of each chapters.
Sommario/riassunto	This book examines in detail the entire process involved in implementing geotechnical projects, from a well-defined initial stress and deformation state, to the completion of the installation process. The individual chapters provide the fundamental knowledge needed to effectively improve soil-structure interaction models. Further, they present the results of theoretical fundamental research on suitable constitutive models, contact formulations, and efficient numerical implementations and algorithms. Applications of fundamental research on boundary value problems are also considered in order to improve the implementation of the theoretical models developed. Subsequent chapters highlight parametric studies of the

respective geotechnical installation process, as well as elementary and large-scale model tests under well-defined conditions, in order to identify the most essential parameters for optimizing the process. The book provides suitable methods for simulating boundary value problems in connection with geotechnical installation processes, offering reliable predictions for the deformation behavior of structures in static contexts or dynamic interaction with the soil.

---