

1. Record Nr.	UNINA9910254193503321
Autore	Hong Yi
Titolo	Deformation and Failure Mechanism of Excavation in Clay Subjected to Hydraulic Uplift / / by Yi Hong, Lizhong Wang
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2016
ISBN	3-662-46507-8
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (162 p.)
Collana	Advanced Topics in Science and Technology in China, , 1995-6819
Disciplina	624.151363
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Geotechnical engineering Numerical analysis Geoengineering, Foundations, Hydraulics Geotechnical Engineering & Applied Earth Sciences Numerical Analysis
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 and index.
Nota di contenuto	Introduction -- Literature Review -- Field Investigation of a Multi-propped Excavation in Soft Clay -- Numerical Analyses of the Multi-propped Excavation in Soft Clay -- Dimensional Analysis of Excavation in Clay Subjected to Hydraulic Uplift -- Centrifuge Modelling of a Multi-propped Excavation in Clay Destabilised by Hydraulic Uplift -- Finite Element Analyses: Back-analysis and Parametric Study -- Interpretations of Measured and Back-analysed Results of Centrifuge Tests -- Numerical Parametric Study -- Conclusions and Future Work.
Sommario/riassunto	This book presents the latest experimental and numerical analysis work in the field of ground deformation and base instability of deep excavations in soft clay subjected to hydraulic uplift. The authors' latest research findings, based on dimensional analyses, well-instrumented full-scale field tests, systematic coupled-consolidation

finite element analyses and centrifuge tests are reported. This book shows how to systematically approach a complex geotechnical problem, from identifying existing problems, reviewing literature, to dimensional and numerical analyses, validation through full-scale testing and centrifuge model testing. The methodologies are also introduced as major tools adopted in geotechnical research.
