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Descrizione fisica	1 online resource (XXV, 848 p. 559 illus., 12 illus. in color.)
Disciplina	624.15
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Geotechnical engineering Mechanics Mechanics, Applied Ocean engineering Geoengineering, Foundations, Hydraulics Geotechnical Engineering & Applied Earth Sciences Solid Mechanics Offshore Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction to modern earthquake engineering -- Offshore and land- based structures -- Measurement of earthquakes -- Essentials of dynamic analysis -- Computer based dynamic analysis and modal testing -- Essentials of soil dynamics -- Determination of site-specific earthquake ground motions -- Representation of earthquake ground motions -- Seismic response and earthquake effects -- Structural and foundation modelling -- Seismic design philosophy -- Seismic analysis methods -- Seismic response of non-structural elements -- Seismic response of tanks due to sloshing -- Influence of fluid-structure interactions on seismic response -- Influence of ice-structure

interactions on seismic response -- Human body response to ground motions -- Sudden subsidence and its assessment -- Mitigation of seismic response – ductility, elevation control, damping apparatus, base isolation and dynamic absorbers -- Seismic retrofit for structures -- Tsunami.

Sommario/riassunto

This book addresses applications of earthquake engineering for both offshore and land-based structures. It is self-contained as a reference work and covers a wide range of topics, including topics related to engineering seismology, geotechnical earthquake engineering, structural engineering, as well as special contents dedicated to design philosophy, determination of ground motions, shock waves, tsunamis, earthquake damage, seismic response of offshore and arctic structures, spatial varied ground motions, simplified and advanced seismic analysis methods, sudden subsidence of offshore platforms, tank liquid impacts during earthquakes, seismic resistance of non-structural elements, and various types of mitigation measures, etc. The target readership includes professionals in offshore and civil engineering, officials and regulators, as well as researchers and students in this field.
