

1. Record Nr.	UNINA9911019829303321
Autore	Elnashai Amr S
Titolo	Fundamentals of earthquake engineering [[electronic resource] /] / Amr S. Elnashai and Luigi Di Sarno
Pubbl/distr/stampa	Chichester, : Wiley, 2008
ISBN	9780470024867 (e-book) 9780470024836 (hbk.) 0-470-02486-0
Descrizione fisica	1 online resource (xxiii, 347 p.)
Altri autori (Persone)	Di SarnoLuigi
Disciplina	624.1762
Soggetti	Earthquake engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Earthquake Characteristics -- 2. Response of Structures -- 3. Earthquake Input Motion -- 4. Response Evaluation -- Appendix A: Structural Configurations and Systems for Effective Earthquake Resistance -- Appendix B: Damage to Structures -- Index.
Sommario/riassunto	Fundamentals of Earthquake Engineering combines aspects of engineering seismology, structural and geotechnical earthquake engineering to assemble the vital components required for a deep understanding of response of structures to earthquake ground motion, from the seismic source to the evaluation of actions and deformation required for design. The nature of earthquake risk assessment is inherently multi-disciplinary. Whereas Fundamentals of Earthquake Engineering addresses only structural safety assessment and design, the problem is cast in its appropriate context by relating structural damage states to societal consequences and expectations, through the fundamental response quantities of stiffness, strength and ductility. The book is designed to support graduate teaching and learning, introduce practicing structural and geotechnical engineers to earthquake analysis and design problems, as well as being a reference book for further studies. Fundamentals of Earthquake Engineering includes material on the nature of earthquake sources and mechanisms, various methods for the characterization of earthquake

input motion, damage observed in reconnaissance missions, modeling of structures for the purposes of response simulation, definition of performance limit states, structural and architectural systems for optimal seismic response, and action and deformation quantities suitable for design. The approach taken avoids tying the book to a specific regional seismic design code of practice and ensures its global appeal to graduate students and practicing engineers.
