

1. Record Nr.	UNINA9910299568303321
Autore	NAZRI FADZLI MOHAMED
Titolo	Seismic Fragility Assessment for Buildings due to Earthquake Excitation [[electronic resource] /] / by FADZLI MOHAMED NAZRI
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2018
ISBN	981-10-7125-X
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (VIII, 114 p. 38 illus., 32 illus. in color.)
Collana	SpringerBriefs in Computational Mechanics, , 2191-5342
Disciplina	624.1762
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Geotechnical engineering Buildings—Design and construction Building Construction Engineering, Architectural Structural materials Geoengineering, Foundations, Hydraulics Geotechnical Engineering & Applied Earth Sciences Building Construction and Design Structural Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Overview of the Seismic Fragility Assessment -- Framework of the Assessment -- Performance of the Buildings Model due to the Nonlinear Analysis -- Summary.
Sommario/riassunto	This book presents a simplified approach to earthquake engineering by developing the fragility curve for regular and irregular moment- resisting frames based on different types of structural material, height, and ground motion records. It examines six sets of concrete and steel frames, which vary in terms of their height (3-, 6- and 9-storey) and include regular and irregular frames. Each structure frame was

designed based on Eurocode 2 and 3 with the aid of Eurocode 8 for earthquake loading. The SAP2000 software was used as the main tool for the pushover analysis and incremental dynamic analysis. Readers are first provided with background information on the development of nonlinear analysis in earthquake engineering. Subsequently, each chapter begins with a detailed explanation of the collapse of the structures and the application in nonlinear analysis. As such, the book will greatly benefit students from both public and private institutions of higher, particularly those who are dealing with the subject of earthquake engineering for the first time. It also offers a valuable guide for Civil Engineering practitioners and researchers who have an interest in structural and earthquake engineering.

---