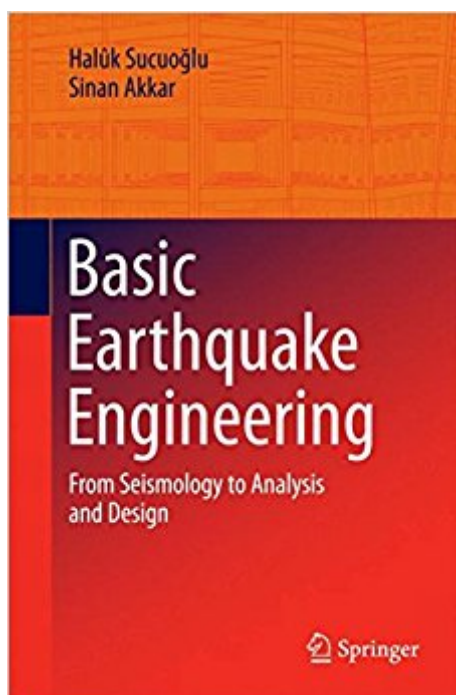


The book was found

# Basic Earthquake Engineering: From Seismology To Analysis And Design



## Synopsis

This book provides senior undergraduate students, master students and structural engineers who do not have a background in the field with core knowledge of structural earthquake engineering that will be invaluable in their professional lives. The basics of seismotectonics, including the causes, magnitude, and intensity of earthquakes, are first explained. Then the book introduces basic elements of seismic hazard analysis and presents the concept of a seismic hazard map for use in seismic design. Subsequent chapters cover key aspects of the response analysis of simple systems and building structures to earthquake ground motions, design spectrum, the adoption of seismic analysis procedures in seismic design codes, seismic design principles and seismic design of reinforced concrete structures. Helpful worked examples on seismic analysis of linear, nonlinear and base isolated buildings, earthquake-resistant design of frame and frame-shear wall systems are included, most of which can be solved using a hand calculator.

## Book Information

Paperback: 288 pages

Publisher: Springer; 2014 edition (May 10, 2014)

Language: English

ISBN-10: 3319010255

ISBN-13: 978-3319010250

Product Dimensions: 6.1 x 0.7 x 9.2 inches

Shipping Weight: 15.2 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,573,804 in Books (See Top 100 in Books) #80 in Books > Engineering & Transportation > Engineering > Civil & Environmental > Seismic Design #204 in Books > Science & Math > Chemistry > Geochemistry #233 in Books > Science & Math > Earth Sciences > Seismology

## Customer Reviews

This book provides senior undergraduate students, master students and structural engineers who do not have a background in the field with core knowledge of structural earthquake engineering that will be invaluable in their professional lives. The basics of seismotectonics, including the causes, magnitude, and intensity of earthquakes, are first explained. Then the book introduces basic elements of seismic hazard analysis and presents the concept of a seismic hazard map for use in seismic design. Subsequent chapters cover key aspects of the response analysis of simple systems

and building structures to earthquake ground motions, design spectrum, the adoption of seismic analysis procedures in seismic design codes, seismic design principles and seismic design of reinforced concrete structures. Helpful worked examples on seismic analysis of linear, nonlinear and base isolated buildings, earthquake-resistant design of frame and frame-shear wall systems are included, most of which can be solved using a hand calculator.

Haluk Sucuoğlu is full professor of Civil Engineering at the Middle East Technical University, Ankara, Turkey, where he also manages the Building and Earthquake Engineering Laboratory. In addition, he is a member of teaching staff on the earthquake engineering program at Pavia University, Rose School, Italy. Professor Sucuoğlu is the current chairman of the Turkish Earthquake Engineering Association and he represents Turkey in the International Association of Earthquake Engineers (IAEE). He is a member of the editorial boards of numerous scientific journals. Sinan Akkar is professor of Civil Engineering at the Middle East Technical University, Ankara, Turkey and also a member of teaching staff on the earthquake engineering program at Pavia University, Rose School, Italy. His main research interests are displacement-based seismic assessment and prediction of strong ground-motion parameters for seismic design. Professor Akkar is currently the Principal Investigator of the Turkish National Strong Motion Project and the NATO Project Director of the Harmonization of Seismic Hazard Maps for the Western Balkan Countries. He is involved in the Seismic Harmonization in Europe project (SHARE, EC-FP7) as a research member.

[Download to continue reading...](#)

Basic Earthquake Engineering: From Seismology to Analysis and Design Earthquake Engineering: From Engineering Seismology to Performance-Based Engineering Perspectives on Earthquake Geotechnical Engineering: In Honour of Prof. Kenji Ishihara (Geotechnical, Geological and Earthquake Engineering) Fire Following Earthquake (American Society of Civil Engineers: Technical Council on Lifeline Earthquake Engineering Monograph, No. 26) Seismic Design and Assessment of Bridges: Inelastic Methods of Analysis and Case Studies (Geotechnical, Geological and Earthquake Engineering) Earthquake: Perspectives on Earthquake Disasters (Disaster Dossiers) Structural Dynamics of Earthquake Engineering: Theory and Application Using Mathematica and Matlab (Woodhead Publishing Series in Civil and Structural Engineering) Seismic Ground Response Analysis (Geotechnical, Geological and Earthquake Engineering) Geotechnical Earthquake Engineering, Second Edition (Mechanical Engineering) Seismic design with supplemental energy dissipation devices (Publication / Earthquake Engineering Research Institute) Seismic Design of

Building Structures: A Professional's Introduction to Earthquake Forces and Design Details, 8th ed.  
Seismic Design of Building Structures: A Professionals Introduction to Earthquake Forces and  
Design Details Gravity Sanitary Sewer Design and Construction (ASCE Manuals and Reports on  
Engineering Practice No. 60) (Asce Manuals and Reports on Engineering ... Manual and Reports on  
Engineering Practice) System Engineering Analysis, Design, and Development: Concepts,  
Principles, and Practices (Wiley Series in Systems Engineering and Management) Graphic Design  
Success: Over 100 Tips for Beginners in Graphic Design: Graphic Design Basics for Beginners,  
Save Time and Jump Start Your Success (graphic ... graphic design beginner, design skills)  
Introduction to Engineering Design and Problem Solving (BEST Basic Engineering Series & Tools)  
G.Dieter's Li.Schmidt's Engineering 4th (Fourth) edition(Engineering Design (Engineering Series)  
[Hardcover])(2008) Bracing for Disaster: Earthquake-Resistant Architecture and Engineering in San  
Francisco, 1838-1933 International Handbook of Earthquake Engineering: Codes, Programs, and  
Examples Dynamics of Structures: Theory and Applications to Earthquake Engineering (2nd  
Edition)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)