

Seismic Design Of Building Structures

Third Printing, incorporating errata, Supplement 1, and expanded commentary, 2013.

This handbook contains up-to-date existing structures, computer applications, and information on planning, analysis, and design seismic design of wood structures. A new and very useful feature of this edition of earthquake-resistant building structures. Its intention is to provide engineers, architects, is the inclusion of a companion CD-ROM disc developers, and students of structural containing the complete digital version of the handbook itself and the following very engineering and architecture with authoritative, yet practical, design information. It represents important publications: an attempt to bridge the persisting gap between 1.UBC-IBC (1997-2000) Structural advances in the theories and concepts of Comparisons and Cross References, ICBO, earthquake-resistant design and their 2000, implementation in seismic design practice. 2. NEHRP Guidelines for the Seismic The distinguished panel of contributors is Rehabilitation of Buildings, FEMA-273, Federal Emergency Management Agency, composed of 22 experts from industry and universities, recognized for their knowledge and 1997, extensive practical experience in their fields. 3. NEHRP Commentary on the GuidelinesFor They have aimed to present clearly and the Seismic Rehabilitation of Buildings, FEMA-274, Federal Emergency Agency concisely the basic principles and procedures pertinent to each subject and to illustrate with Management Agency, 1997, practical examples the application of these 4. NEHRP Recommended Provisions for principles and procedures in seismic design Seismic Regulations for New Buildings and practice. Where applicable, the provisions of Older Structures, Part 1 - Provisions, various seismic design standards such as the FEMA-302, Federal Emergency 2000, UBC-97, FEMA-273/274 and ATC-40 Management Agency, 1997.

Providing real world applications for different structural types and seismic characteristics, Seismic Design of Steel Structures combines knowledge of seismic behavior of steel structures with the principles of earthquake engineering. This book focuses on seismic design, and concentrates specifically on seismic-resistant steel structures. Drawing on experience from the Northridge to the Tohoku earthquakes, it combines understanding of the seismic behavior of steel structures with the principles of earthquake engineering. The book focuses on the global as well as local behavior of steel structures and their effective seismic-resistant design. It recognises different types of earthquakes, takes into account the especial danger of fire after earthquake, and proposes new bracing and connecting systems for new seismic resistant steel structures, and also for upgrading existing reinforced concrete structures. Includes the results of the extensive use of the DUCTROCT M computer program, which is used for the evaluation of the seismic available ductility, both monotonic and cyclic, for different types of earthquakes Demonstrates good design principles by highlighting the behavior of seismic-resistant steel structures in many applications from around the world Provides a methodological approach, making a clear distinction between strong and low-to-moderate seismic regions This book serves as a reference for structural engineers involved in seismic design, as well as researchers and graduate students of seismic structural analysis and design.

Seismic Design for Architects shows how structural requirements for seismic resistance can become an integral part of the design process. Structural integrity does not have to be at the expense of innovative, high standard design in seismically active zones. * By emphasizing design and discussing key concepts with accompanying visual material, architects are given the background knowledge and practical tools needed to deal with aspects of seismic design at all stages of the design process * Seismic codes from several continents are drawn upon to give a global context of seismic design * Extensively illustrated with diagrams and photographs * A non-mathematical approach focuses upon the principles and practice of seismic resistant design to enable readers to grasp the concepts and then readily apply them to their building designs Seismic Design for Architects is a comprehensive, practical reference work and text book for students of architecture, building science, architectural and civil engineering, and professional architects and structural engineers.

Seismic Design of Reinforced Concrete and Masonry Buildings

Design of Steel Structures for Buildings in Seismic Areas

Seismic Performance of Asymmetric Building Structures

State-of-the-art Report

The Seismic Design Handbook

This book is intended to serve as a textbook for engineering courses on earthquake resistant design. The book covers important attributes for seismic design such as material properties, damping, ductility, stiffness and strength. The subject coverage commences with simple concepts and proceeds right up to nonlinear analysis and push-over method for checking building adequacy. The book also provides an insight into the design of base isolators highlighting their merits and demerits. Apart from the theoretical approach to design of multi-storey buildings, the book highlights the care required in practical design and construction of various building components. It covers modal analysis in depth including the important missing mass method of analysis and tension shift in shear walls and beams. These have important bearing on reinforcement detailing. Detailed design and construction features are covered for earthquake resistant design of reinforced concrete as well as confined and reinforced masonry structures. The book also provides the methodology for assessment of seismic forces on basement walls and pile foundations. It provides a practical approach to design and detailing of soft storeys, short columns, vulnerable staircases and many other components. The book bridges the gap between design and construction. Plenty of worked illustrative examples are provided to aid learning. This book will be of value to upper undergraduate and graduate students taking courses on seismic design of structures.

* Presents the basics of seismic-resistant design of concrete structures. * Provides a major focus on the seismic design of precast bracing systems.

NEW TWELFTH EDITION AVAILABLE Seismic Design of Building Structures presents the seismic design concepts most essential to engineers, architects, and students of civil and structural engineering, and architecture. The book's 15 chapters provide a concise but thorough review of seismic theory, code application, design principles, and structural analysis. The 30 example problems demonstrate how to apply concepts, codes, and equations to solve realistic problems. More than 125 practice problems provide opportunities for independent problem-solving practice, and complete solutions allow you to check your solution approach. This book includes two comprehensive indexes—one of key terms and another of seismic building codes—to quickly direct you to the information you are looking for. You can also locate related support material by following references throughout the text to the 150 equations, 29 tables, 144 figures, and 16 appendices, and to relevant codes and standards. Topics Covered Basic Seismology Details of Seismic-Resistant Structures (Concrete, Masonry, Steel, Wood) Diaphragm Theory Earthquake Characteristics Effects of Earthquakes on Structures General Structural Design Response of Structures Seismic Building Code Special Design Features Tilt-Up Construction Vibration Theory Referenced Codes and Standards ACI 318 ACI 530 AISC 341 AISC 360 ASCE/SEI7 IBC NDS SDPWD An Introduction to Seismic Design for the California Civil Seismic exam California Structural Engineer Seismic exam Civil PE exam Structural Engineering (SE) exam Architect Registration Examination (ARE)

Finley Charney provides clear, authoritative explanations of the seismic design provisions contained in Minimum Design Loads for Buildings and Other Structures, Standard ASCE/SEI 7-10.

Handouts of the International Training Programs for Seismic Design of Building Structures

Implications of Recorded Earthquake Ground Motions on Seismic Design of Building Structures

Seismic Design of Buildings & Bridges

Seismic Design of Reinforced Concrete Buildings

Civil & Structural Engineering

Containing everything civil and structural engineers need to prepare for the seismic design topics of the Structural Engineering I and II exams, this guide emphasizes methods that lead to the quickest and simplest solution to any problem. In addition to exam preparation, this book is an outstanding reference manual for practicing engineers and upper-level engineering students. Book jacket.

This Special Issue was created to collect the most recent and novel research on seismic performance evaluation of building structures. This issue includes three important topics on seismic engineering for building structures: (1) seismic design and performance evaluation, (2) structural dynamics, and (3) seismic hazard and risk analysis. To protect building structures from earthquakes, it is necessary to conduct seismic performance evaluations on structures with reliable methods and to retrofit these structures appropriately using the results of the seismic performance evaluation.

... has been updated to conform to the 2009 International Building Code (IBC), the 2008 Building Code Requirements for Structural Concrete (ACI 318) and the 208 Building Code Requirements for Masonry Structures (ACI 530)"--Preface.

Many important advances in designing earthquake-resistant structures have occurred over the last several years. Civil engineers need an authoritative source of information that reflects the issues that are unique to the field. Comprising chapters selected from the second edition of the best-selling Handbook of Structural Engineering, Earthquake Eng

Seismic Design of RC Buildings

Seismic Design of Precast Concrete Building Structures

Performance-Based Seismic Design of Concrete Structures and Infrastructures

Advanced Design Examples of Seismic Retrofit of Structures

From Seismology to Analysis and Design

Emphasizes actual structural design, not analysis, of multistory buildings for seismic resistance. Strong emphasis is placed on specific detailing requirements for construction. Fundamental design principles are presented to create buildings that respond to a wide range of potential seismic forces, which are illustrated by numerous detailed examples. The discussion includes the design of reinforced concrete ductile frames, structural walls, dual systems, reinforced masonry structures, buildings with restricted ductility and foundation walls. In addition to the examples, full design calculations are given for three prototype structures.

This is arguably the most comprehensive book on the subject of architectural-structural design decisions that influence the seismic performance of buildings. It explores the intersection between the architecture and the structural design through the lens of earthquake engineering. The main aim of this unique book, written by renowned engineer M.Llanji, is to explain in the simplest terms, the architecture and structure of earthquake-resistant buildings, using many practical examples and case studies to demonstrate the fact that structures and buildings react to earthquake forces mainly according to their form, configuration and material. The purpose of this book is to introduce a new perspective on seismic design: a more visual, conceptual and architectural one, to both architects and engineers. In a word, it is to introduce architectural opportunities for earthquake resistant buildings, treating seismic design as a central architectural issue. A non-mathematical and practical approach emphasizing graphical presentation of problems and solutions makes it equally accessible to architectural and engineering professionals. The book will be invaluable for practicing engineers, architects, students and researchers. More than 500 illustrations/photographs and numerous case studies. Seismic Architecture covers: • Earthquake effects on structures • Seismic force resisting systems • Advanced systems for seismic protection • Architectural/Structural configuration and its influence on seismic response • Contemporary architecture in seismic regions • Seismic response of nonstructural elements • Seismic retrofit and rehabilitation of existing buildings • Seismic architecture.

Solid design and craftsmanship are a necessity for structures and infrastructures that must stand up to natural disasters on a regular basis. Continuous research developments in the engineering field are imperative for sustaining buildings against the threat of earthquakes and other natural disasters. Performance-Based Seismic Design of Concrete Structures and Infrastructures is an informative reference source on all the latest trends and emerging data associated with structural design. Highlighting key topics such as seismic assessments, shear wall structures, and infrastructure resilience, this is an ideal resource for all academicians, students, professionals, and researchers that are seeking new knowledge on the best methods and techniques for designing solid structural designs.

Everything you need to pass the test! Seismic Design of Buildings and Bridges: 2002-2003 Edition by Alan Williams, Ph.D., S.E., C. Eng., a leading structural engineering author - Written for civil and structural engineers preparing for the: Special Civil Engineering Exam - California National Structural Engineering I and II Exams California Structural Engineering Exam - Includes more than 100 problems and step-by-step solutions from recent exams - Offers 18 HP-48C calculator programs for frequently occurring calculations in the appendix - Contains an 8-page summary of useful equations - Reflects current publications of SEAOC and FEMA - Conforms to the 1997 edition of the UBC - Updated based on the latest AISC and ACI standards - Provides comprehensive clarification of applicable Building Codes and Standard Specifications - Uses provisions of the 1999 SEAOC bluebook, 1999 FEMA Advisory No. 2, 2000 FEMA 350 Design of Steel Moment Frame Buildings, and 1997 AISC Seismic Provisions - Cites extensive reference publications that reflect current design procedures Other Engineering Resources Available from Oxford University Press For the PE Exams Civil Engineering License Review, Fourteenth Edition, Donald G. Newnan, P.E. (1-57645-029-5) Civil Engineering: Problems and Solutions, Fourteenth Edition, Donald G. Newnan, P.E. (1-57645-030-9) Civil Engineering Problem Solving Flowcharts, Second Edition, Jorge L. Rodriguez, P.E. (1-57645-038-4) Structural Engineering License Review, Problems and Solutions, 2002-2003 Edition, Alan Williams, S.E. (0-19-515916-0) Design of Reinforced Concrete Structures, Second Edition, Alan Williams, S.E. (1-57645-051-1) Civil Engineering: Bridge Structures, Alan Williams, S.E. (1-57645-041-4) Civil Engineering: Building Structures, Alan Williams, S.E. (1-57645-040-6) Civil Engineering: Foundations and Retaining Structures, Alan Williams, S.E. (1-57645-042-2) Civil Engineering: Seismic Design, Alan Williams, S.E. (1-57645-043-0) For an Introduction to MATLAB Getting Started with MATLAB 5: A Quick Introduction for Scientists and Engineers by Rudra Pratap (0-19-512947-4) Getting Started with MATLAB, Version 6: A Quick Introduction for Scientists and Engineers by Rudra Pratap (0-19-515014-7) For Background on the Engineering Profession Fundamentals of Ethics for Scientists and Engineers by Edmund G. Seebauer and Robert L. Barry (0-19-513488-5) Engineers and Their Profession, Fifth Edition, by John D. Kemper and Billy R. Sanders (0-19-512057-4) Being Successful as an Engineer by W. H. Roadstrum (0-910554-2-2) Money Back Guarantee--Pass the test or get your money back. See details inside! For more information and a complete list of FE and PE Exam review books available from Engineering Press visit www.engineeringpress.com.

Seismic Design of Buildings and Bridges

Seismic Design of Steel Structures

Seismic Design Methods for Steel Building Structures

Minimum Design Loads for Buildings and Other Structures

Seismic Design of Buildings to Eurocode 8

Advanced Design Examples of Seismic Retrofit of Structures provides insights on the problems associated with the seismic retrofitting of existing structures. The authors present various international case studies of seismic retrofitting projects and the different possible strategies on how to handle complex problems encountered. Users will find tactics on a variety of problems that are commonly faced, including problems faced by engineers and authorities who have little or no experience in the practice of seismic retrofitting. Provides several examples of retrofitting projects that cover different structural systems, from non-engineered houses, to frame buildings Presents various retrofitting methods through examples Provides detailed, step-by-step design procedures for each example Includes real retrofit projects with photos of the details of various retrofitting techniques Contains several modeling details and hints making use of various software in this area

This book focuses on the seismic design of building structures and their foundations to Eurocode 8. It covers the principles of seismic design in a clear but brief manner and then links these concepts to the provisions of Eurocode 8. It addresses the fundamental concepts related to seismic hazard, ground motion models, basic dynamics, seismic analysis, siting considerations, structural layout, and design philosophies, then leads to the specifics of Eurocode 8. Code procedures are applied with the aid of walk-through design examples which, where possible, deal with a common case study in most chapters. As well as an update throughout, this second edition incorporates three new and topical chapters dedicated to specific seismic design aspects of timber buildings and masonry structures, as well as base-isolation and supplemental damping. There is renewed interest in the use of sustainable timber buildings, and masonry structures still represent a popular choice in many areas. Moreover, seismic isolation and supplemental damping can offer low-damage solutions which are being increasingly considered in practice. The book stems primarily from practical short courses on seismic design which have been run over a number of years and through the development Eurocode 8. The contributors to this book are either specialist academics with significant consulting experience in seismic design, or leading practitioners who are actively engaged in large projects in seismic areas. This experience has provided significant insight into important areas in which guidance is required.

Seismic Design of Asymmetric Buildings covers practical, detailed investigations on the effective assessment of structural seismic response under excessive vibrations, demonstrating behavioural aspects from local response perspective to global seismic response. The work provides comprehensive analytical, computational, experimental investigations, and proposes improved design guidelines that structural engineers can utilize to enhance the seismic design of building structures. Combining extensive experimental and numerical data for seismic performance assessment with a particular focus on asymmetric building structures, the book includes: • An overview of asymmetric building structures from seismic damage perspective • Local and global performance assessment of asymmetric structures under extreme seismic actions • Post-earthquake damage evaluation from varying frequency trends • Extended numerical applications for experimental response validations • Evaluation of critical regions of asymmetric structure with stress concentration • Statistical distribution of seismic response under varying design parameters • Design guidelines for asymmetric building structures This work's comprehensive evaluations are carried out with modern sensing techniques planned with meticulous attention to cover objectives with a particular focus on asymmetry in reinforced concrete and steel structures. It assesses various aspects of asymmetric building structures that are rarely dealt with in the current literature. It gathers fruitful information from various building design codes and explains their limitations in addressing damage-related challenges, which is not only useful for practicing engineers but also for academics. The book will be invaluable for experts, researchers, students and practitioners from relevant areas, as well as for emergency preparedness managers.

In California, engineers taking the civil PE exam are also required to take two open-book exams on seismic and surveying. Each exam is 2 1/2 hours with around 50 multiple-choice problems. Both exams are given every April and October. Seismic Design of Building Structures is the main review for the seismic exam. It is complemented with a Solved Problems book and a Practice Exams book. For the surveying exam, the review text is Surveying Principles for Civil Engineers. A Practice Exam is also offered. All these books reference the 1997 UBC, which is used on the current exams.

Seismic Design of Building Structures

Earthquake Engineering for Structural Design

Implications of Record Earthquake Ground Motions on Seismic Design of Building Structures

Earthquake-Resistant Structures

Seismic Architecture

Displacement-Based Seismic Design of Structures is a book primarily directed towards practicing structural designers who are interested in applying performance-based concepts to seismic design. Since much of the material presented in the book has not been published elsewhere, it will also be of considerable interest to researchers, and to graduate and upper-level undergraduate students on earthquake engineering who wish to develop a deeper understanding of how design can be used to control seismic response. The design philosophy is based on determination of the optimum structural strength to achieve a given performance limit state, related to a defined level of damage, under a specified level of seismic intensity.

Emphasis is also placed on how this strength is distributed through the structure. This takes two forms: methods of structural analysis and capacity design. It is shown that equilibrium considerations frequently lead to a more advantageous distribution of strength than that resulting from stiffness considerations. Capacity design considerations have been re-examined, and new and more realistic design approaches are presented to insure against undesirable modes of inelastic deformation. The book considers a wide range of structural types, including separate chapters on frame buildings, wall buildings, dual wall/frame buildings, masonry buildings, timber structures, bridges, structures with isolation or added damping devices, and structures with asymmetric buildings.

Complete coverage of earthquake-resistant concrete building design Written by a renowned seismic engineering expert, this authoritative resource discusses the theory and practice for the design and evaluation of earthquake-resisting reinforced concrete buildings. The book addresses the behavior of reinforced concrete materials, components, and systems subjected to routine and extreme loads, with an emphasis on response to earthquake loading. Design methods, both at a basic level as required by current building codes and at an advanced level needed for special problems such as seismic performance assessment, are described. Data and models useful for analyzing reinforced concrete structures as well as numerous illustrations, tables, and equations are included in this detailed reference. Seismic Design of Reinforced Concrete Buildings covers: Seismic design and performance verification Steel reinforcement Concrete Confined concrete Axially loaded members Moment and axial force Shear in beams, columns, and walls Development and anchorage Beam-column connections Slab-column and slab-wall connections Seismic design overview Special moment frames Special structural walls Gravity framing Diaphragms and collectors Foundations

The costs of inadequate earthquake engineering are huge, especially for reinforced concrete buildings. This book presents the principles of earthquake-resistant structural engineering, and uses the latest tools and techniques to give practical design guidance to address single or multiple seismic performance levels. It presents an elegant, simple and theoretically coherent design framework. Required strength is determined on the basis of an estimated yield displacement and desired limits of system ductility and drift demands. A simple deterministic approach is presented along with its elaboration into a probabilistic treatment that allows for design to limit annual probabilities of failure. The design method allows the seismic force resisting system to be designed on the basis of elastic analysis results, while nonlinear analysis is used for performance verification. Detailing requirements of ACI 318 and Eurocode 8 are presented. Students will benefit from the coverage of seismology, structural dynamics, reinforced concrete, and capacity design approaches, which allows the book to be used as a foundation text in earthquake engineering.

Theory and Practice

Earthquake Engineering Frontiers in the New Millennium

For Civil and Structural Engineers

Eurocode 8: Design of Structures for Earthquake Resistance. Part 1: General Rules, Seismic Action and Rules for Buildings

The architecture of earthquake resistant structures

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.

An Original Source of Expressions and Tools for the Design of Concrete Elements with Eurocode Seismic design of concrete buildings needs to be performed to a strong and recognized standard. Eurocode 8 was introduced recently in the 30 countries belonging to CEN, as part of the suite of Structural Eurocodes, and it represents the first European Standard for seismic design. It is also having an impact on seismic design standards in countries outside Europe and will be applied there for the design of important facilities. This book: Contains the fundamentals of earthquakes and their effects at the ground level, as these are affected by local soil conditions, with particular reference to EC8 rules Provides guidance for the conceptual design of concrete buildings and their foundations for earthquake resistance Overviews and exemplifies linear and nonlinear seismic analysis of concrete buildings for design to EC8 and their modelling Presents the application of the design verifications, member dimensioning and detailing rules of EC8 for concrete buildings, including their foundations Serves as a commentary of the parts of EC8 relevant to concrete buildings and their foundations, supplementing them and explaining their proper application Seismic Design of Concrete Buildings to Eurocode 8 suits graduate or advanced undergraduate students, instructors running courses on seismic design and practicing engineers interested in the sound application of EC8 to concrete buildings. Alongside simpler examples for analysis and detailed design, it includes a comprehensive case study of the conceptual design, analysis and detailed design of a realistic building with six stories above grade and two basements, with a complete structural system of walls and frames. Homework problems are given at the end of some of the chapters.

Earthquake engineering is the ultimate challenge for structural engineers. Even if natural phenomena involve great uncertainties, structural engineers need to design buildings, bridges, and dams capable of resisting the destructive forces produced by them. These disasters have created a new awareness about the disaster preparedness and mitigation. Before a building, utility system, or transportation structure is built, engineers spend a great deal of time analyzing those structures to make sure they will perform reliably under seismic and other loads. The purpose of this book is to provide structural engineers with tools and information to improve current building and bridge design and construction practices and enhance their sustainability during and after seismic events. In this book, Khan explains the latest theory, design applications and Code Provisions. Earthquake-Resistant Structures features seismic design and retrofitting techniques for low and high rise buildings, single and multi-span bridges, dams and nuclear facilities. The author also compares and contrasts various seismic resistant techniques in USA, Russia, Japan, Turkey, India, China, New Zealand, and Pakistan. Written by a world renowned author and educator Seismic design and retrofitting techniques for all structures Tools improve current building and bridge designs Latest methods for building earthquake-resistant structures Combines physical and geophysical science with structural engineering

This volume comprises papers presented at the China-US Millennium Symposium on Earthquake Engineering, held in Beijing, China, on November 8-11, 2000. This conference provides a forum for advancing the field of earthquake engineering through multi-lateral cooperation.

Guide to the Seismic Load Provisions of ASCE 7-10

Post-Kobe Seismic Design and Construction of Japanese Building Structures

Performance-based Seismic Design of Building Structures

Seismic Loads

A Professional's Introduction to Earthquake Forces and Design Details

This volume elucidates the design criteria and principles for steel structures under seismic loads according to Eurocode 8-1. Worked Examples illustrate the application of the design rules. Two case studies serve as best-practice samples.

The aim of this state-of-art report is to present current practices for use of precast and prestressed concrete in countries in seismic regions, to recommend good practice, and to discuss current developments. The report has been drafted by 30 contributors from nine different countries. This state-of-art report covers: state of the practice in various countries; advantages and disadvantages of incorporating precast reinforced and prestressed concrete in construction; lessons learned from previous earthquakes; construction concepts; design approaches; primary lateral load resisting systems (precast and prestressed concrete frame systems and structural walls including dual systems) diaphragms of precast and prestressed concrete floor units; modelling and analytical methods; gravity load resisting systems; foundations; and miscellaneous elements (shells, folded plates, stairs and architectural cladding panels). Design equations are reported where necessary, but the emphasis is on principles. Ordinary cast-in-place reinforced concrete is not considered in this report. This fib state-of-art report is intended to assist designers and constructors to provide safe and economical applications of structural precast concrete and at the same time to allow innovation in design and construction to continue. This Bulletin N° 27 was approved as an fib state-of-art report in autumn 2002 byfib Commission 7. Seismic design.

The book, after two introductory chapters on seismic design principles and structural seismic analysis methods, proceeds with the detailed description of seismic design methods for steel building structures. These methods include all the well-known methods, like force-based or displacement-based methods, plus some other methods developed by the present authors or other authors that have reached a level of maturity and are applicable to a large class of steel building structures. For every method, detailed practical examples and supporting references are provided in order to illustrate the methods and demonstrate their merits. As a unique feature, the present book describes not just one, as it is the case with existing books on seismic design of steel structures, but various seismic design methods including application examples worked in detail. The book is a valuable source of information, not only for MS and PhD students, but also for researchers and practicing engineers engaged with the design of steel building structures.

Seismic Design for Architects

Seismic Design of Reinforced and Precast Concrete Buildings

Design of Reinforced Concrete Buildings for Seismic Performance

Design, Build, and Retrofit

Displacement-based Seismic Design of Structures