1. Record Nr. UNINA9910823564703321 Autore Simiu Emil Titolo Design of buildings for wind [[electronic resource]]: a practical guide for ASCE 7-10 standard users and designers of special structures // **Emil Simiu** Pubbl/distr/stampa Hoboken,: Wiley, 2011 **ISBN** 1-61344-880-5 9786613282699 1-118-08613-9 1-283-28269-0 1-118-07735-0 1-118-07737-7 Edizione [2nd ed.] Descrizione fisica xiv, 338 p.: ill Classificazione TEC009020 Altri autori (Persone) SimiuEmil 624.1/75 Disciplina Soggetti Bridges - Aerodynamics **Buildings - Aerodynamics** Wind resistant design Wind-pressure Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Guide to the ASCE 7-10 Standard Provisions on Wind Loads: Asce 7-10 Wind Loading Provisions -- Regular and Simplified Approach: Risk Category, Basic Wind Speed, Enclosure, Exposure, Topographic Factor -- Regular Approach : Steps Common to all Buildings/Other Structures (MWFRS and C & C) -- Regular Approach : Buildings, Parapets, Overhangs (Directional Procedure), MWFRS -- Regular Approach: Low-Rise Buildings, Parapets, Overhangs (Envelope Procedure). MWFRS -- Regular Approach: Structures other than Buildings, MWFRS -- Simplified Approach: Enclosed Simple Diaphragm Buildings, Parapets, Overhangs (MWFRS) -- Regular and Simplified Approaches : C & C -- Wind Engineering Fundamentals. Atmospheric Circulations --The Atmospheric Boundary Layer -- Extreme Wind Speeds and Wind-

Induced Effects -- Bluff Body Aerodynamics Basics; Aerodynamic Testing -- Structural Dynamics -- Aeroelasticity -- Structural Reliability

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under Wind Loading -- Loss Estimation -- Wind Effects on Buildings; Rigid Buildings -- Tall Buildings.

ASCE 7 is the US standard for identifying minimum design loads for buildings and other structures. ASCE 7 covers many load types, of which wind is one. The purpose of this book is to provide structural and architectural engineers with the practical state-of-the-art knowledge and tools needed for designing and retrofitting buildings for wind loads. The book will also cover wind-induced loss estimation. This new edition include a guide to the thoroughly revised, 2010 version of the ASCE 7 Standard provisions for wind loads; incorporate major advances achieved in recent years in the design of tall buildings for wind; present material on retrofitting and loss estimation; and improve the presentation of the material to increase its usefulness to structural engineers. Key features: New focus on tall buildings helps make the analysis and design guidance easier and less complex. Covers the new simplified design methods of ASCE 7-10, guiding designers to clearly understand the spirit and letter of the provisions and use the design methods with confidence and ease. Includes new coverage of retrofitting for wind load resistance and loss estimation from hurricane winds. Thoroughly revised and updated to conform with current practice and research."-- "The purpose of this book is to provide structural and architectural engineers with the practical state-of-theart knowledge and tools needed for designing and retrofitting buildings for wind loads. The book will also cover wind-induced loss estimation. This new edition include a guide to the thoroughly revised, 2010 version of the ASCE 7 Standard provisions for wind loads; incorporate major advances achieved in recent years in the design of tall buildings for wind; present material on retrofitting and loss estimation; and improve the presentation of the material to increase its usefulness to structural engineers.