

1. Record Nr.	UNINA9910574860603321
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Titolo	Reinforced Concrete with Worked Examples / / by Franco Angotti, Matteo Guiglia, Piero Marro, Maurizio Orlando
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-92839-X
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (860 pages)
Collana	Engineering Series
Disciplina	624.18341
Soggetti	Concrete Buildings - Design and construction Building materials Building Construction and Design Structural Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	General structural design criteria -- Materials -- Durability and cover to reinforcement -- Structural analysis -- Analysis of second order effects with axial load -- Prestressed concrete -- Ultimate limit state for bending with or without axial force -- Shear and torsion at ultimate limit state -- Punching shear -- Strut and tie models -- Serviceability limit states (SLS) -- Detailing of reinforcement and structural members for buildings -- Tables and Diagrams.
Sommario/riassunto	This textbook describes the design of reinforced and prestressed concrete structures according to the latest advances both in the field of materials, concrete and steel, and in the field of structural analysis. These advances have been included in current version of Eurocode 2, which is taken as reference. All subjects are presented starting from their theoretical bases and passing to corresponding EC2 formulations. A large part of the book is concerned with the most innovative EC2 parts, like nonlinear structural analyses, second-order effects, punching and strut-and-tie models. The textbook is equipped with numerous worked examples, useful for the reader who is not familiar with the design of reinforced and prestressed concrete structures by

the Limit State Method. Examples have been chosen among the most frequent cases of the professional practice. Thanks to this structure, it can be of interest both to structural designers for their professional training and to students of engineering and architecture schools for their studies. The volume contains twelve chapters, which follow the same structure of EC2, except for chapter 6 (dealing with prestressed concrete structures), which does not match any chapter of EC2, as prestressed concrete is considered in EC2 as a particular case of reinforced concrete, and corresponding formulations are shed over different chapters.

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