1. Record Nr. UNINA9910139468003321 Autore Kurrer Karl-Eugen Titolo The history of the theory of structures [[electronic resource]]: from arch analysis to computational mechanics / / Karl-Eugen Kurrer Berlin, : Ernst & Sohn, c2008 Pubbl/distr/stampa 3-433-60134-8 **ISBN** 1-282-46102-8 9786612461026 3-433-60016-3 3-433-60017-1 Descrizione fisica 1 online resource (854 p.) Disciplina 624 624.1709 Soggetti Structural analysis (Engineering) - History Engineering Inglese Lingua di pubblicazione **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 THE HISTORY OF THE THEORY OF STRUCTURES; Foreword; Preface; Preface to the first, German edition; CONTENTS: 1 The tasks and aims of a historical study of theory of structures; 2 Learning from the history of structural analysis: 11 introductory essays; 3 The first fundamental engineering science disciplines: theory of structures and applied mechanics: 4 From masonry arch to elastic arch: 5 The beginnings of a theory of structures; 6 The discipline-formation period of theory of structures; 7 From construction with iron to modern structural steelwork 8 Member analysis conquers the third dimension: the spatial framework9 Reinforced concrete's influence on theory of structures; 10 From classical to modern theory of structures; 11 Twelve scientific controversies in mechanics and theory of structures; 12 Perspectives

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This book traces the evolution of theory of structures and strength of

materials - the development of the geometrical thinking of the

Renaissance to become the fundamental engineering science discipline rooted in classical mechanics. Starting with the strength experiments of Leonardo da Vinci and Galileo, the author examines the emergence of individual structural analysis methods and their formation into theory of structures in the 19th century. For the first time, a book of this kind outlines the development from classical theory of structures to the structural mechanics and computational mec