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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Basic Theory -- One And Two Degree OF Freedom Systems -- Eigan value Calculations Of Continuous Systems -- The Finite Element Method In Dynamics -- The Normal Mode Method -- Frequency And Time Domain Response Calculations Dynamic Response Earthquake Excitation -- Wind Induced Dynamic Response Calculations -- Damping Rectangular Plates -- Moving Load Of Beams -- Basic Theory Of Stochastic Processes -- Time Domain Simulations -- Element Properties.
Sommario/riassunto	This book introduces to the theory of structural dynamics, with focus on civil engineering structures that may be described by line-like beam or beam-column type of systems, or by a system of rectangular plates. Throughout this book the mathematical presentation contains a classical analytical description as well as a description in a discrete finite element format, covering the mathematical development from basic assumptions to the final equations ready for practical dynamic response predictions. Solutions are presented in time domain as well as in frequency domain. Structural Dynamics starts off at a basic level and step by step brings the reader up to a level where the necessary safety considerations to wind or horizontal ground motion induced dynamic design problems can be performed. The special theory of the tuned mass damper has been given a comprehensive treatment, as this is a theory not fully covered elsewhere. For the same reason a chapter on

the problem of moving loads on beams has been included.