

1. Record Nr.	UNINA9910299692103321
Autore	Chandrasekaran Srinivasan
Titolo	Dynamic Analysis and Design of Offshore Structures // by Srinivasan Chandrasekaran
Pubbl/distr/stampa	New Delhi : , : Springer India : , : Imprint : Springer, , 2015
ISBN	81-322-2277-6
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (305 p.)
Collana	Ocean Engineering & Oceanography, , 2194-640X ; ; 5
Disciplina	627.98
Soggetti	Offshore structures Engineering geology Oceanography Cogeneration of electric power and heat Fossil fuels Offshore Engineering Geoengineering Ocean Sciences Fossil Fuel
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	Introduction to Offshore Platforms -- Environmental Forces -- Introduction to Structural Dynamics -- Damping in Offshore Structures -- Hydrodynamic Response of Perforated Offshore Members -- Introduction to Stochastic Dynamics -- Applications in Preliminary Analysis and Design -- References. -Index.
Sommario/riassunto	This book attempts to provide readers with an overall idea of various types of offshore platform geometries. It covers the various environmental loads encountered by these structures, a detailed description of the fundamentals of structural dynamics in a class-room style, estimate of damping in offshore structures and their applications in the preliminary analysis and design. Basic concepts of structural dynamics are emphasized through simple illustrative examples and exercises. Design methodologies and guidelines, which are FORM based concepts are explained through a few applied example structures. Each chapter also has tutorials and exercises for self-

learning. A dedicated chapter on stochastic dynamics will help the students to extend the basic concepts of structural dynamics to this advanced domain of research. Hydrodynamic response of offshore structures with perforated members is one of the recent research applications, which is found to be one of the effective manner of retrofitting offshore structures. Results of recent research, validated by the experimental and numerical studies are presented to update the readers. Integration of the concepts of structural dynamics with the FORM-evolved design of offshore structures is a unique approach used in this book. The book will prove useful to the practicing and consulting offshore structural engineers, as also to students and researchers working in the field. .
