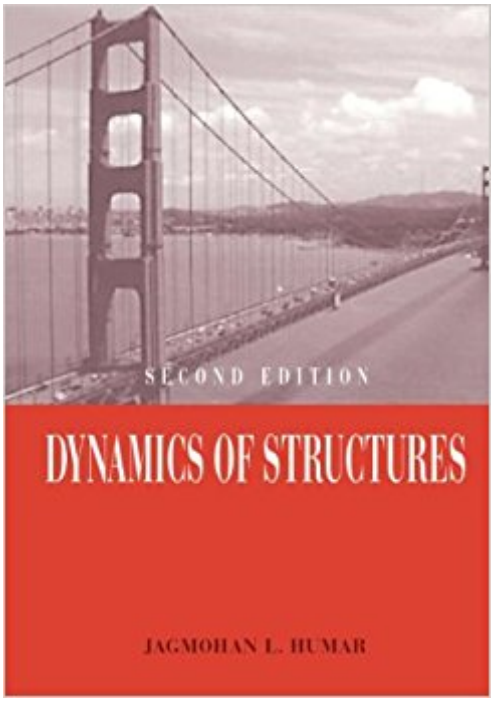
Dynamics Of Structures: Second Edition



Synopsis

This major textbook provides comprehensive coverage of the analytical tools required to determine the dynamic response of structures. The topics covered include: formulation of the equations of motion for single- as well as multi-degree-of-freedom discrete systems using the principles of both vector mechanics and analytical mechanics; free vibration response; determination of frequencies and mode shapes; forced vibration response to harmonic and general forcing functions; dynamic analysis of continuous systems;and wave propagation analysis. The key assets of the book include comprehensive coverage of both the traditional and state-of-the-art numerical techniques of response analysis, such as the analysis by numerical integration of the equations of motion and analysis through frequency domain. The large number of illustrative examples and exercise problems are of great assistance in improving clarity and enhancing reader comprehension. The text aims to benefit students and engineers in the civil, mechanical and aerospace sectors.

Book Information

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Customer Reviews

Dr. Jag Mohan Humar, is currently Distinguished Research Professor of Civil Engineering at Carleton University, Ottawa, Canada. Dr. Humar obtained his Ph.D. from Carleton University in 1974. He joined Carleton as a faculty member in the Department of Civil Engineering in 1975 andÃ Â became a full professor in 1983, and served as the Chairman of the Department of Civil and Environmental Engineering from 1989 to 2000. Dr. HumarÃ¢â ¬â„¢s main research interest is in structural dynamics and earthquake engineering. He has published over 120 journal and

conference papers in this and related areas. He is also the author of a book entitled "Dynamics of Structures," published by Prentice Hall, USA in 1990. The second edition of the book has been published by Balkema Publishers of Netherlands in 2002. In February 2000 Dr. Humar led a Canadian Scientific mission to Gujarat to study the damage caused by the Bhuj earthquake. Dr. Humar is actively involved in the development of seismic design provisions of the National Building Code of Canada. Over the last 15 years he has served as a member of the Standing Committee on Earthquake Design, an advisory body to National Building Code of Canada (NBCC) for its seismic design provisions. During these years the NBCC seismic provisions have undergone substantial revisions, and many of the changes and new requirements have been influenced by Dr. HumarÃ¢â ¬â„¢s work in the field. Along with teaching, academic administration, and research, Dr. Humar has also been active in engineering consulting He served as a special consultant for several outstanding civil engineering projects, including the National Aviation Museum in Ottawa and the SkyDome in Toronto. He was a seismic design consultant on several other projects, which include the Earthquake Response Study of the Alexandria Bridge across the Ottawa River, Seismic Rehabilitation of the Victoria Museum, Ottawa, Blast Load Analysis of the Mackenzie Tower, Parliamentary Precinct, Ottawa. He also served as a member and chair of the experts panel to review the seismic rehabilitation and upgrade of the West Block, Parliamentary Precinct, Ottawa. Dr. Humar has received several awards for his outstanding contributions to teaching, research, engineering practice, and the profession. Dr. Humar serves as a field referee for many international journals including the ASCE Journals of Structures and Engineering Mechanics, the Journal of Sound and Vibration, the Journal of Structural Dynamics and Earthquake Engineering, and the Canadian Journal of Civil Engineering. For 7 years he served as an Associate Editor for the Canadian Journal of Civil Engineering. Currently he is the Associate Editor of the International Journal of Earthquake Engineering and Structural Dynamics.

I am a graduate student in earthquake engineering and structural dynamics. I have almost all of the books that are out there on the subject. I find this book to be the best. It is more advanced than other books on the subject (e.g. Chopra, Clough&Penzien, Tedesco et al., etc.) but also more comprehensive and thorough.My only objection is its outrageous price. I find it completely ridiculous to pay $195, and that is why I decided to actually borrow and constantly renew the book from the library and not buy it. It is sad that such a great book will lose many prospective buyers because of its high price. Of course, you can buy the paperback for $95--which I personally think is also an outrageous price to pay for a paperback.Bottom line: If money is not an issue for you, go ahead and

buy the best book in structural dynamcics out there.

The best resource for the study of structural dynamics.

It is a classic book Dynamics of Structures. I use it in teaching Seismic Engineering at National University of Cajamarca - Peru. Also, I use it in research.ThanksMarcos

Prof. Humar has produced a very complete book with more than 900 pages. Certainly it brings to the reader all the necessary topics of structural dynamics in a very clear way.

Just like his teaching, Humar’s book is straight forward and no-nonsense. This man is THE prof to have for complexe subject matter and his text is just the same: THE reference for dynamic analysis of structures. Presents all the relevant information you require, with easy to follow examples and a clarity we all wish was the standard for engineering publications. I have not even taken this as a course text, but looked into and purchased as a desk reference.... wound up reading a good portion of the book out of personal interest. There is a good review available at [...] . Take a look if you want another opinion.

This book is a real "must have" for anyone who loves structural dynamics and would like to study further. Even though it is expensive, I really think that it’s worth it. There is no other book as thorough as this book in this subject. I just simply like this book, and also because I know the author is a tremendously nice professor.

Introduction to Structures (Architect’s Guidebooks to Structures) Anatomy of Orofacial Structures, 7e (Anatomy of Orofacial Structures (Brand)) The Complete Manual of Positional Chess: The Russian Chess School 2.0 - Middlegame Structures and Dynamics (Volume 2) Dynamics of Structures (Prentice-Hall International Series in Civil Engineering and Engineering Mechanics) Dynamics of Structures Dynamics of Structures: Theory and Applications to Earthquake Engineering Finite Models and Methods of Dynamics in Structures (Developments in Civil Engineering) Experimental Structural Dynamics: An Introduction to Experimental Methods of Characterizing Vibrating Structures Tunneling Dynamics in Open Ultracold Bosonic Systems: Numerically Exact Dynamics Ã¢â ¬â œ Analytical Models Ã¢â ¬â œ Control Schemes (Springer Theses)