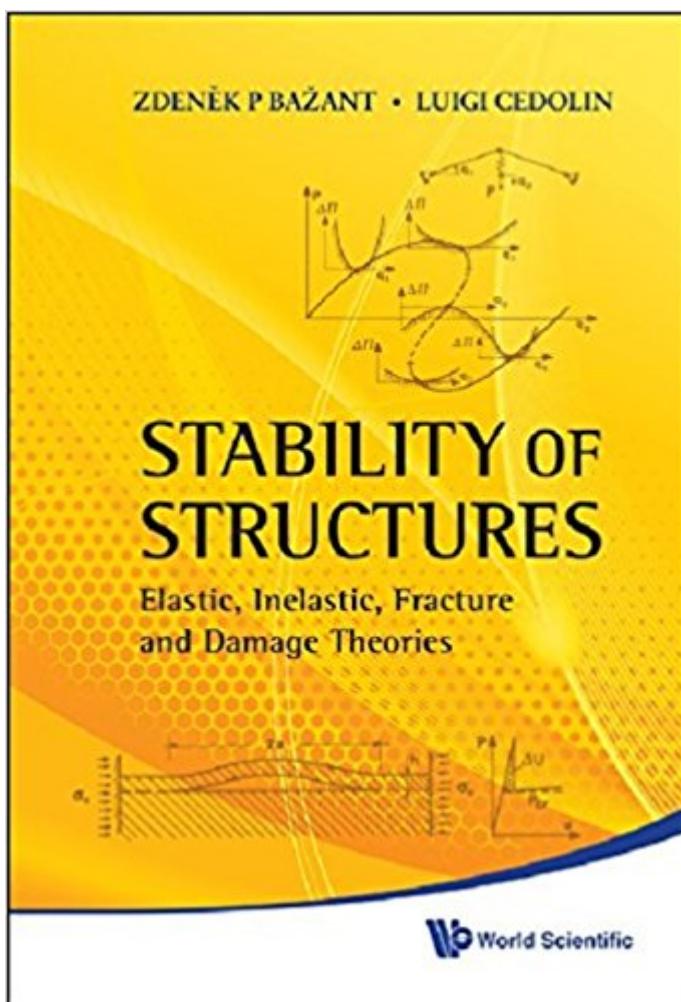


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Stability Of Structures: Elastic, Inelastic, Fracture And Damage Theories



Synopsis

A crucial element of structural and continuum mechanics, stability theory has limitless applications in civil, mechanical, aerospace, naval and nuclear engineering. This text of unparalleled scope presents a comprehensive exposition of the principles and applications of stability analysis. It has been proven as a text for introductory courses and various advanced courses for graduate students. It is also prized as an exhaustive reference for engineers and researchers. The authors' focus on understanding of the basic principles rather than excessive detailed solutions, and their treatment of each subject proceed from simple examples to general concepts and rigorous formulations. All the results are derived using as simple mathematics as possible. Numerous examples are given and 700 exercise problems help in attaining a firm grasp of this central aspect of solid mechanics. The book is an unabridged republication of the 1991 edition by Oxford University Press and the 2003 edition by Dover, updated with 18 pages of end notes.

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"This is a very welcome book, tackling a subject area of great complexity with much verve and panache... It is clear from the outset that the authors interpret the 'stability of structures' in the broadest possible sense, on which they are to be congratulated... It is well served by 442 illustrations--important in a work so full of nonlinear phenomena. It is a bulky tour de force, packed with worked examples and problems for students ... and a valuable reference guide for research workers ... In total, there is no denying the enormity of the contribution." --London Times Higher

Education Supplement" Bazant and Cedolin have created a comprehensive, modern, detailed, rigorous treatment of the principles and applications of structural stability analysis that should quickly become the premier reference book on this subject of great importance to civil, mechanical, and aerospace engineering, and to materials science.... Every graduate-level engineering library should acquire this important new book. --Choice "Cohesively presents a subject which has traditionally been touched upon in many different courses. ...Unique in that it deals more fully with nonelastic stability than do similar texts." --The New York Public Library "Especially welcome for its uncommonly broad horizons and its innovative features.... Numerous examples, exercises, references to real-life engineering situations and even technical codes, are bound to be appreciated by teachers and students in structural mechanics and by practicing engineers as well. The wealth of well-organized and up-to-date knowledge presented in this thick and elegant volume is also likely to appeal as a reference book of lasting value to the community of researchers in solid, material and structural mechanics." --European Journal of Mechanics "This volume covers a remarkably wide range of topics in both structural and continuum mechanics...One could hardly imagine that it would be possible for the material to be expounded in a clearer, more concise, and yet at the same time more rigorous manner....Likely to be regarded for many years as the authoritative and definitive text in a theoretical field of absolute central importance to structural engineers." --The Structural Engineer "A monumental work ... This resourceful and extraordinarily informative book is a landmark in the field of structural stability. The authors, quite remarkably, treat the subject of stability in an exceedingly broad sense and present a gamut of theories seldom seen in book form. The book is a valuable treatise which provides the readers with an encyclopedic account of classical and modern theories of structural stability and of material stability. The book is an indispensable reference for all those involved in research and practice in the field of stability." --Journal of Structural Engineering "... the directness of [the authors' approach makes much of the book accessible to anyone with the requisite background knowledge. All will profit from the way in which unusual examples are used to illuminate unfamiliar aspects of the subject-matter. These thousand pages represent an invaluable distillation of knowledge on all aspects of this notoriously difficult subject and the book will surely be treasured as a work of reference for years to come." --Engineering Structures and Materials and Design "Bazant and Cedolin have made a major contribution to mechanics by writing their book on structural ability....Their book is truly a major accomplishment. In its nearly one thousand pages the book covers both the elastic and inelastic buckling of columns, frames, plates and shells, and it also has extensive treatment of aspects of fracture and localization which are closely tied to stability." ----Journal of Structural Engineering ASCE

A crucial element of structural and continuum mechanics, stability theory has limitless applications in civil, mechanical, aerospace, naval and nuclear engineering. This text of unparalleled scope presents a comprehensive exposition of the principles and applications of stability analysis. It has been proven as a text for introductory courses and various advanced courses for graduate students. It is also prized as an exhaustive reference for engineers and researchers. The authors' focus on understanding of the basic principles rather than excessive detailed solutions, and their treatment of each subject proceed from simple examples to general concepts and rigorous formulations. All the results are derived using as simple mathematics as possible. Numerous examples are given and 700 exercise problems help in attaining a firm grasp of this central aspect of solid mechanics. The book is an unabridged republication of the 1991 edition by Oxford University Press and the 2003 edition by Dover, updated with 18 pages of end notes. --This text refers to the Hardcover edition.

This book is a great reference for any structural engineer's library, although it is definitely more of a graduate/PhD level. For instance, as a working structural engineer for 10+ years, I really haven't needed such a reference. But now that I am in graduate school, it is a great book to have. Maybe after learning the content in it, I will use it when working, but that remains to be seen.

This text book offers extensive collections of analytical analyses of stability of structures. If you want to find a great book about analytical methods (rather than numerical techniques). This book is the one. It's hard to imagine a textbook that can beat this one in next 10 years. Btw this Dover version is an affordable version from its 1991 version from Oxford university press.

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