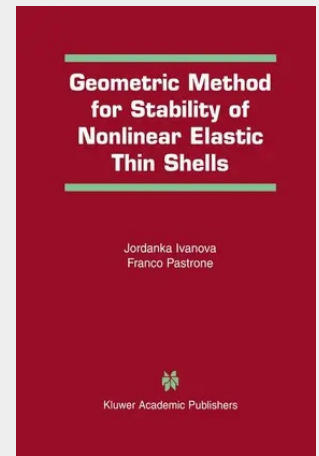


Geometric Method for Stability of Non-Linear Elastic Thin Shells

PREFACE This book deals with the new developments and applications of the geometric method to the nonlinear stability problem for thin non-elastic shells. There are no other published books on this subject except the basic ones of A. V. Pogorelov (1966, 1967, 1986), where variational principles defined over isometric surfaces, are postulated, and applied mainly to static and dynamic problems of elastic isotropic thin shells. A. V. Pogorelov (Harkov, Ukraine) was the first to provide in his monographs the geometric construction of the deformed shell surface in a post-critical stage and deriving explicitly the asymptotic formulas for the upper and lower critical loads. In most cases, these formulas were presented in a closed analytical form, and confirmed by experimental data. The geometric method by Pogorelov is one of the most important analytical methods developed during the last century. Its power consists in its ability to provide a clear geometric picture of the postcritical form of a deformed shell surface, successfully applied to a direct variational approach to the nonlinear shell stability problems. Until now most Pogorelov's monographs were written in Russian, which limited the diffusion of his ideas among the international scientific community. The present book is intended to assist and encourage the researches in this field to apply the geometric method and the related results to everyday engineering practice.

PREFACE This book deals with the new developments and applications of the geometric method to the nonlinear stability problem for thin non-elastic shells. There are no other published books on this subject except the basic ones of A. V. Pogorelov (1966, 1967, 1986), where variational principles defined over isometric surfaces, are postulated, and applied mainly to static and dynamic problems of elastic isotropic thin shells. A. V. Pogorelov (Harkov, Ukraine) was the first to provide in his monographs the geometric construction of the deformed shell surface in a post-critical stage and deriving explicitly the asymptotic formulas for the upper and lower critical loads. In most cases, these formulas were presented in a closed analytical form, and confirmed by experimental data. The geometric method by Pogorelov is one of the most important analytical methods developed during the last century. Its power consists in its ability to provide a clear geometric picture of the postcritical form of a deformed shell surface, successfully applied to a direct variational approach to the nonlinear shell stability problems. Until now most Pogorelov's monographs were written in Russian, which limited the diffusion of his ideas among the international scientific community. The present book is intended to assist and encourage the researches in this field to apply the geometric method and the related results to everyday engineering practice.



106,99 €

99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781461355908

Medium: Buch

ISBN: 978-1-4613-5590-8

Verlag: Springer

Erscheinungstermin: 14.03.2014

Sprache(n): Englisch

Auflage: 2002

Produktform: Kartoniert

Gewicht: 406 g

Seiten: 244

Format (B x H): 155 x 235 mm

