MONOGRAPHS

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Chaos in Structural Mechanics

(with Vadim A. Krysko)
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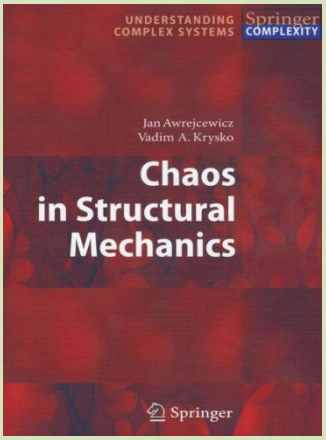
SUMMARY



[Preface & Contents]

[Book Review]
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This volume introduces and reviews novel theoretical approaches to modeling strongly nonlinear behaviour of either individual or interacting structural mechanical units such as beams, plates and shells or composite systems thereof.

The approach draws upon the well-established fields of bifurcation theory and chaos and emphasizes the notion of control and stability of objects and systems the evolution of which is governed by nonlinear ordinary and partial differential equations. Computational methods, in particular the Bubnov-Galerkin method, are thus described in detail.

Written for:

Scientists and engineers in academic and industrial R+D

Keywords:

- Bubnov-Galerkin Method
- chaotic motion
- nonlinear vibrations
- structural mechanics