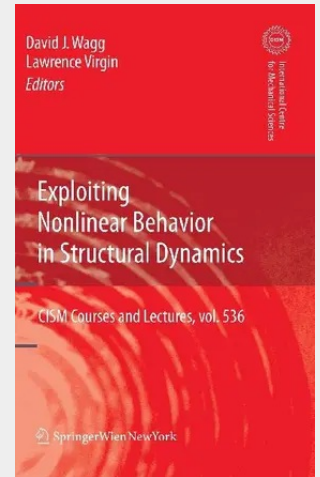


Exploiting Nonlinear Behavior in Structural Dynamics

Introductory material.- Approximate methods for analyzing nonlinear structures.- Vibration isolation.- Designing nonlinear torsional vibration absorbers.- Vibrations of beams in the elasto-plastic and geometrically nonlinear regime.- Control and exploitation of nonlinearity in smart structures. The articles in this volume give an overview and introduction to nonlinear phenomena in structural dynamics. Topics treated are approximate methods for analyzing nonlinear systems (where the level of nonlinearity is assumed to be relatively small), vibration isolation, the mitigation of undesirable torsional vibration in rotating systems utilizing specifically nonlinear features in the dynamics, the vibration of nonlinear structures in which the motion is sufficiently large amplitude and structural systems with control.

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