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Nota di contenuto	Chap 1. Interface Reduction on Hurty/Craig-Bampton Substructures with Frictionless Contact -- Chap 2. Experimental Path Following of Unstable Static Equilibria for Snap-Through Buckling -- Chap 3. Direct Detection of Nonlinear Modal Interactions and Model Updating using Measured Time Series -- Chap 4. Pareto Optimization of a Nonlinear Tuned Mass Damper to Control Vibrations in Hand Held Impact Machines -- Chap 5. Inverse Methods for Characterizing of Contact Areas in Mechanical Systems -- Chap 6. Experimental Characterization of a new Benchmark Structure for Prediction of Damping Nonlinearity -- Chap 7. Nonlinear System Identification for Joints Including Modal

Interactions -- Chap 8. Performance of Nonlinear Modal Model in Predicting Complex Bilinear Stiffness -- Chap 9. Low Order Nonlinear Dynamic Modelling of Fuel Supply Pipes -- Chap 10. System Identification to Estimate the Nonlinear Modes of a Gong -- Chap 11. An Enhanced Static Reduction Algorithm for Predictive Modeling of Bolted Joints -- Chap 12. Time-varying Spectral Submanifolds: Analytic Calculation of Backbone Curves and Forced Response -- Chap 13. Operational Modal Analysis based Stress Estimation in Friction Systems -- Chap 14. Damping Estimation of Friction Systems in Random Vibrations -- Chap 15. System Identification of Jointed Structures: Nonlinear Modal Testing vs. State-Space Model Identification -- Chap 16. Effect of Boundary Conditions on Finite Element Submodeling -- Chap 17. On Euler Buckling and Snap-Through -- Chap 18. Solitons in Cyclic and Symmetric Structures -- Chap 19. Experimental and Numerical Nonlinear Modal Analysis of a Beam with Impact: Part I - Numerical Investigation -- Chap 20. Experimental and Numerical Nonlinear Modal Analysis of a Beam with Impact: Part II - Experimental Investigation -- Chap 21. The Effect of Non-Flat Interfaces on System Dynamics -- Chap 22. Investigating Modal Contributions using a Galerkin Model -- Chap 23. Acoustic Excitation of a Flanged Joint -- Chap 24. In Situ Measurements of Interfacial Contact Pressure During Impact Hammer Test -- Chap 25. An Improved Shape Reconstruction Methodology for Long rod like Structures using Cosserat Kinematics-Including the Poisson’s Effect -- Chap 26. Computing Nonlinear Normal Modes of Aerospace Structures using the Multi-Harmonic Balance Method -- Chap 27. Nonlinear Identification of an Aero-Engine Component Using Polynomial Nonlinear State Space Model -- Chap 28. Curved Structures that can Elastically Snap-through -- Chap 29. Experimental Analysis of Non-linear Damping Performance in Composites Materials Thanks to Local Transduction-dissipation Phenomenon -- Chap 30. Subspace-based Identification of a Distributed Nonlinearity in Time and Frequency Domains -- Chap 31. Reduced Order Modelling for Non-Linear Rotating Systems in ALE Formulation with Contact -- Chap 32. Damage Precursor Indicator for Aluminum 7075-T6 Based on Nonlinear Dynamics -- Chap 33. Application of Control-based Continuation to a Nonlinear System with Harmonically Coupled Modes -- Chap 34. Numerically Assessing the Relative Significance of Nonlinear Normal Modes to Forced Responses -- Chap 35. Direct Frequency Domain Identification of time Varying Systems -- Chap 36. Reduced-order Modelling for Investigating Nonlinear FEM Systems -- Chap 37. Nonlinear Forced Response of a Composite fan Blade Actuated by Piezoelectric Patches: Simulation and Testing -- Chap 38. Locating Nonlinearity in Mechanical Systems - A Dynamic Network Perspective -- Chap 39. Tracing a Prescribed Force-displacement Curve using Topology Optimization -- Chap 40. Model Updating of a Wing-Engine Structure with Nonlinear Connections -- Chap 41. Modal Analysis of Axially Deforming Rods with Isolated Lap Joints -- Chap 42. Identification of Nonlinear Viscoelastic Parameters Based on an Enhanced Oberst Beam Method -- Chap 43. A General Framework for Time Domain Finite Element Analysis of Viscoelastically Damped Structures -- Chap 44. Nonlinear Structural, Inertial and Damping Effects in an Oscillating Cantilever Beam -- Chap 45. Reduced Order Modeling of Structures with Preloaded Bolted Joints by the use of Trial Vector Derivatives -- Chap 45. Towards the Development of a Model for Nonlinear Elements in Machine Tools -- Chap 46. Nonlinear Characterization of a Machine Tool Energy Absorber -- Chap 47. Tutorial: Bolted Joints and Tribomechadynamics (60-min).

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Conference and Exposition on Structural Dynamics, 2018, the first volume of nine from the Conference brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on fundamental and applied aspects of Nonlinear Dynamics, including papers on: Nonlinear System Identification Nonlinear Modeling & Simulation Nonlinear Reduced-order Modeling Nonlinearity in PracticeNonlinearity in Aerospace Systems Nonlinearity in Multi-Physics Systems Nonlinear Modes and Modal Interactions Experimental Nonlinear Dynamics.