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Descrizione fisica	1 online resource (IX, 341 p. 285 illus., 250 illus. in color.)
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Soggetti	Vibration Dynamical systems Dynamics Aerospace engineering Astronautics Acoustical engineering Energy harvesting Vibration, Dynamical Systems, Control Aerospace Technology and Astronautics Engineering Acoustics Energy Harvesting
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Scaling up of the Impedance-Matched Multi-Axis Test (IMMAT) Technique -- Chapter 2.6-DOF Shaker Test Input Derivation from Field Test -- Chapter 3. Frequency Based Spatial Damping Identification – Theoretical and Experimental Comparison -- Chapter 4. Controlability of Aerospace Static Mechanical Loading Coupled with Dynamic Forces -- Chapter 5. Identification of Full-field Dynamic Loads on Structures Using Computer Vision and Unsupervised Machine Learning -- Chapter 6. Research of Under-Sampling Technique for Digital Image Correlation in Vibration Measurement -- Chapter 7.

Nonlinear Dynamic Analysis of a Thermally Buckled Aircraft Panel using NNMs -- Chapter 8. Empirically-Derived, Constitutive Damping Model for Cellular Silicone -- Chapter 9. Simultaneous Qualification Testing of Multiple Components and the Influence of Closely Spaced Vibration Modes -- Chapter 10. Extraction of Full-field Structural Dynamics from Digital Video Measurements in Presence of Large Rigid Body Motion -- Chapter 11. Efficient Full-field Operational Modal Analysis using Silicon Retina Imager Measurements -- Chapter 12. Hydro-Mechanical Coupling in Unstable Aircraft Braking Systems -- Chapter 13. Energy Based Representation of 6-Dof Shaker Shock Low-Cycle Fatigue Tests -- Chapter 14. Experimental Execution of 6DOF Tests Derived from Field Tests -- Chapter 15. Vibration of Cracked Timoshenko Beams Made of Functionally Graded Material -- Chapter 16. Eliminating Blur in Small Unmanned Aircraft Imaging Systems -- Chapter 17. Experimental Modal Analysis of an Aircraft Fuselage Panel -- Chapter 18. Nonlinear Vibrations of a Functionally Graded Material Microbeam with Geometric Nonlinearity -- Chapter 19. Method to Predict the Shock Response Spectrum Shape from Frequency Response Functions -- Chapter 20. Investigation and Application of Digital Image Correlation Technology in Vibration Measurement Based on two Cameras -- Chapter 21. A Mission Synthesis Procedure for Sine-on-Random Excitations in a Helicopter Application -- Chapter 22. A Multi-View Digital Image Correlation for Extracting Mode Shapes of a Tire -- Chapter 23. Modal Expansion using Strain Mode Shapes -- Chapter 24. Vibration Suppression of MR Sandwich Beams Based on Fuzzy Logic -- Chapter 25. Logic Analytical Modeling of a Piezoelectric Energy Harvesters Under Random Base Excitation -- Chapter 26. Driving Point FRF Fixture Evaluation for Shock Testing -- Chapter 27. Nonlinear Transverse Vibrations of a Beam with Multiple Breathing Edge Cracks -- Chapter 28. TESS Lens-Bezel Assembly Modal Testing -- Chapter 29. Vibration Suppression in Metastructures Using Zigzag Inserts Optimized by Genetic Algorithms -- Chapter 30. Experimental Modal Analysis on Vibration Data Measured by Digital Image Correlation -- Chapter 31. Rolling Bearing Diagnostics by means of EMD-Based Independent Component Analysis on Vibration and Acoustic Data -- Chapter 32. Flutter and Limit Cycle Oscillation Suppression Using Linear and Nonlinear Tuned Vibration Absorbers -- Chapter 33. A Montecarlo Approach to Test the Modes of Vibration of a 6-DoF Parallel Kinematic Simulator -- Chapter 34. Equating Severity in Qualification Testing -- Chapter 35. Design of an Assembly for Nonlinear Vibration Reduction -- Chapter 36. A Numerical Approach to System Model Identification of Random Vibration Test.

Sommario/riassunto

Shock & Vibration, Aircraft/Aerospace and Energy Harvesting, Volume 9: Proceedings of the 35th IMAC, A Conference and Exposition on Structural Dynamics, 2017, the ninth volume of ten 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 Shock & Vibration, Aircraft/Aerospace and Energy Harvesting including papers on: Shock & Vibration Testing Aircraft/Aerospace Applications Optical Techniques: Digital Image Correlation Vibration Suppression & Control Damage Detection Energy Harvesting .