1. Record Nr.	UNINA9910337468503321
Titolo	Model Validation and Uncertainty Quantification, Volume 3 : Proceedings of the 36th IMAC, A Conference and Exposition on Structural Dynamics 2018 / / edited by Robert Barthorpe
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	87-438-0335-0 87-7004-967-X 3-319-74793-2
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (IX, 312 p. 242 illus., 213 illus. in color.)
Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
Disciplina	519
Soggetti	Engineering mathematics Engineering - Data processing Multibody systems Vibration Mechanics, Applied Civil engineering Solids Mathematical and Computational Engineering Applications Multibody Systems and Mechanical Vibrations Civil Engineering Solid Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Sparse Deconvolution for the Inverse Problem of Multiple-impact Force Identification -- Chapter 2. Validation of Container System Component Models for Drops -- Chapter 3. Validation of Container System Finite Element Models for IAEA Compliance -- Chapter 4. Nonlinear Squeezing Wavelet Transform for Rotor Rub-impact Fault Detection -- Chapter 5. Experimental Credibility and its Role in Model Validation and Decision Making -- Chapter 6. An

Experimental Case Study for Nonlinear Model Validation: Effect of Nonlinearities in an Aero-Engine Structure -- Chapter 7. Finite Element Model Updating of a Connecting Structure Based on Strain -- Chapter 8. Nonlinearities of an Aircraft Piccolo Tube: Identification and Modeling -- Chapter 9. Reliability Analysis of Existing Bridge Foundations for Reuse -- Chapter 10. Recent Developments in Hardware-in-the-Loop Testing -- Chapter 11. Assessing Structural Reliability at the Component Test Stage using Real-Time Hybrid Substructuring -- Chapter 12. ModalIdentification Using a Roving Actuator and a Fixed Sensor -- Chapter 13. Validation of Lightweight Antenna Reflector Model for Environmental Acoustic Testing Operating Conditions -- Chapter 14. Confidence in the Prediction of Unmeasured System Output Using Roll-up Methodology -- Chapter 15. Application of the Transfer Matrix Method for the Analysis of Lateral Vibrations of Drillstrings with Parameter Uncertainties -- Chapter 16. Consolidation of Weakly Coupled Experimental System Modes -- Chapter 17. Fatigue Monitoring and Remaining Lifetime Prognosis using Operational Vibration Measurements -- Chapter 18. Feasibility of Applying Phase-Based Video Processing for Modal Identification of Concrete Gravity Dams -- Chapter 19. Using 2D Phase-Based Motion Estimation and Video Magnification for Binary Damage Identification on a Wind Turbine Blade -- Chapter 20. Hierarchical Bayesian Calibration and Response Prediction of a 10-Story Building Model -- Chapter 21. Scaling and Structural Similarity underUncertainty -- Chapter 22. Bayesian History Matching for Forward Model-Driven Structural Health Monitoring -- Chapter 23. Augmented Reality for Next Generation Infrastructure Inspections -- Chapter 24. A Distribution-Based Damping Estimation Method for Random Vibration Response and its Applications -- Chapter 25. A Case Study for Integrating Comp/Sim Credibility and Convolved UQ and Evidence Theory Results to Support Risk Informed Decision Making -- Chapter 26. Material Parameter Identification and Response Prediction of shearing Process for Flying Shear Machine based on Model Validation -- Chapter 27. Probabilistic Maintenance-Free Operating Period via Bayesian Filter with Markov Chain Monte Carlo (MCMC) Simulations and Subset Simulation -- Chapter 28. Bayesian Model Updating of a Damaged School Building in Sankhu, Nepal -- Chapter 29. Material Uncertainty and Response Bounds: Novel Super-Ellipsoidal Analysis -- Chapter 30. Interpreting the Eigenbasis of Principal Component Analysis to Identify Design Space Regions of Interest -- Chapter 31. Uncertainty Quantification in Nanoscale Impact Experiment in Energetic Materials -- Chapter 32. Analysis of Contact Dynamics using Controlled Impact Excitations -- Chapter 33. Extraction of Coupling Stiffness of Specimens Printed with Selective Laser Melting using Modal Analysis -- Chapter 34. Quantification of Dynamic Model Validation Metrics using Uncertainty Propagation from Requirements -- Chapter 35. Natural Frequency Testing and Model Correlation of Rocket Engine Structures in Liquid Hydrogen – Phase I, Cantilever Beam -- Chapter 36. Optimal Maintenance of Naval Vessels Considering Service Life Uncertainty -- Chapter 37. Keynote: On the Monitoring-Driven Assessment of Engineered Systems (40-min).

Sommario/riassunto	Model Validation and Uncertainty Quantification, Volume 3: Proceedings of the 36th IMAC, A Conference and Exposition on Structural Dynamics, 2018, the third 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 Model Validation and Uncertainty Quantification, including papers on: Uncertainty Quantification in Material Models Uncertainty Propagation in Structural

Dynamics Practical Applications of MVUQ Advances in Model Validation & Uncertainty Quantification: Model Updating Model Validation & Uncertainty Quantification: Industrial Applications Controlling Uncertainty Uncertainty in Early Stage Design Modeling of Musical Instruments Overview of Model Validation and Uncertainty.