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Nota di contenuto	Chapter 1. On Model Validation and Bifurcating Systems: An Experimental Case Study -- Chapter 2. A Comparative Assessment of Online and Offline Bayesian Estimation of Deterioration Model Parameters -- Chapter 3. Finite Element Model Updating Using a Shuffled Complex Evolution Markov Chain Algorithm -- Chapter 4. On the Dynamic Virtualization of a 3D-printed Scaled Wind Turbine Blade

-- Chapter 5. Wavelet Energy Features for Damage Identification: Sensitivity to Measurement Uncertainties -- Chapter 6. Advanced Meta-modelling Techniques and Sensitivity Analysis for Rotordynamics in an Uncertain Context -- Chapter 7. Variational Filter for Predictive Modeling of Structural Systems -- Chapter 8. Optimal Sensor Configuration Design for Virtual Sensing in a Wind Turbine Blade using Information Theory -- Chapter 9. Probability Bounds Analysis Applied to Multi-Purpose Crew Vehicle Nonlinearity -- Chapter 10. Physics-Based Reduction with Monitoring Data Assimilation for Adaptive Representations in Structural Systems -- Chapter 11. Comprehensive Testing Environment to Evaluate Approaches in Uncertainty Quantification for Passive and Active Vibration Isolation -- Chapter 12. An Optimal Sensor Network Design Framework for Structural Health Monitoring Using Value of Information -- Chapter 13. Uncertainty Effects on Bike Spoke Wheel Modal Behaviour -- Chapter 14. Probabilistic Assessment of Footfall Vibration -- Chapter 15. Digital Twin Modeling for Offshore Wind Turbine Drivetrain Monitoring: A Numerical Study -- Chapter 16. Prediction of Footbridge Vibrations and their Dependence on Pedestrian Loads -- Chapter 17. Combining Simulation and Experiment for Acoustic-Load Identification.

Sommario/riassunto

Model Validation and Uncertainty Quantification, Volume 3: Proceedings of the 40th IMAC, A Conference and Exposition on Structural Dynamics, 2022, 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 and Propagation in Structural Dynamics Bayesian Analysis for Real-Time Monitoring and Maintenance Uncertainty in Early Stage Design Quantification of Model-Form Uncertainties Fusion of Test and Analysis MVUQ in Action.