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Soggetti	Multibody systems Vibration Mechanics, Applied Building materials Buildings - Design and construction Internet of things Multibody Systems and Mechanical Vibrations Engineering Mechanics Structural Materials Building Construction and Design Internet of Things
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Nota di contenuto	Operational Modal Analysis as a tool for bridge model updating. Application to an unconventional case study -- Assessment of a damaged bridge based on modal identification from ambient vibration tests -- Validation of an automated approach for the definition of reference modal properties on onshore wind turbines -- The analysis for the acceleration data of vehicle running on over 100 bridges based on SSMA -- Probabilistic regression model for OMA-based damping

estimates of a cable-stayed bridge -- An automated algorithm for experimental OMA: application on a Warren truss railway bridge with a permanent monitoring system -- Automated structural modal tracking of suspension bridges subjected to operational changes -- Investigation of Transmissibility-based Operational Modal Analysis from ground excitation -- Bayesian Structural Model Update with Two-Step MCMC Methods Enabling the Evaluation of the Tail Space -- Tension force estimation of post-tensioning external tendons through vibration-based monitoring: experimental validation -- First applications and results of the SHM of residential buildings in Italy -- First results from Operational Modal Analysis of a floating offshore wind turbine -- Vibration-based monitoring for non-destructive testing of post-tensioning external tendons -- Effect of changing environment on the dynamic characteristics of an overpass -- In depth assessment of a pre-stressed concrete road bridge based on dynamic bridge behaviour – follow-up analysis of structural integrity and evaluation of maintenance condition -- Continuous SHM of railway bridges based on vibration analysis of qualitative, selected, asynchronous data -- Vibration-based monitoring of continuous welded rails -- Simulation of the rupture of the contact wire of a high speed catenary -- A Simulation Study on Characterizing Transfer Functions of Railway Tracks Using Train-borne Laser Doppler Vibrometer -- Monitoring railway infrastructure through a freight wagon equipped with smart sensors.

Sommario/riassunto

This volume presents peer-reviewed contributions from the 10th International Conference on Experimental Vibration Analysis for Civil Engineering Structures (EVACES), held in Milan, Italy on August 30-September 1, 2023. The event brought together engineers, scientists, researchers, and practitioners, providing a forum for discussing and disseminating the latest developments and achievements in all major aspects of dynamic testing for civil engineering structures, including instrumentation, sources of excitation, data analysis, system identification, monitoring and condition assessment, in-situ and laboratory experiments, codes and standards, and vibration mitigation. The topics included but were not limited to: damage identification and structural health monitoring; testing, sensing and modeling; vibration isolation and control; system and model identification; coupled dynamical systems (including human–structure, vehicle–structure, and soil–structureinteraction); and application of advanced techniques involving the Internet of Things, robot, UAV, big data and artificial intelligence.
