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Nota di contenuto	'Build Back Better', Principles of Reconstruction-. Actively and Semi-Actively Controlled Structures Under Seismic Actions: Modeling and Analysis -- Advances in Online Structural Identification -- Ambient Vibration Testing of Cultural Heritage Structures -- Ancient Monuments Under Seismic Actions: Modeling and Analysis -- Archaeoseismology -- Assessment of Existing Structures using Inelastic Static Analysis -- Assessment of Existing Structures using Response History Analysis -- Base-isolated Systems, Reliability-based Characterization of -- Building Codes and Standards -- Building Damage from Multi-resolution, Object-Based, Classification Techniques -- Building Monitoring: GB-SAR -- Classically and Non-classically Damped Multi Degree of Freedom (MDOF) Structural Systems, Dynamic Response Characterization of -- Community Recovery Following Earthquake Disasters -- Damage Detection in Built-up Areas Using SAR Images --

Damage to Infrastructure: Modelling -- Earthquake Damage Assessment from VHR Data: Case Studies -- Earthquake Disaster Recovery: Leadership and Governance -- Earthquake Early Warning System in Taiwan -- Earthquake Location -- Earthquake Magnitude Estimation -- Earthquake Protection of Essential Facilities -- Earthquake Recurrence Law and the Weibull Distribution -- Earthquake Return Period and its Incorporation into Seismic Actions -- Economic Recovery following Earthquake disasters -- Equivalent Static Analysis of Structures subjected to Seismic Actions -- European Structural Design Codes: Seismic Actions -- Frequency-Magnitude Distribution of Seismicity in Volcanic Regions -- Global Navigation Satellite System (GNSS) in Earthquake Engineering, Usage of -- Historical Seismometer -- Hyperspectral Data in Urban Areas -- Integrated Earthquake Simulation -- Land Use Planning following Earthquake Disaster -- Learning from Earthquake Disasters -- Legislation Changes Following Earthquake Disasters -- Liquid Storage Tanks: Seismic Analysis -- Masonry Box Behavior -- Masonry Macro-block Analysis. -- Masonry Modeling -- Masonry Structures, Overview -- Mixed In-height Concrete-Steel Buildings Under Seismic Actions: Modeling and Analysis -- Noise-based Seismic Imaging and Monitoring of Volcanoes. -- Nonlinear Dynamic Seismic Analysis -- Nonlinear Finite Element Analysis -- Nonlinear System Identification: Particle based methods -- Ocean Bottom Seismometer -- Operational Modal Analysis in Civil Engineering: An Overview -- Palaeoseismology and Landslides -- Palaeoseismology: Integration with Seismic Hazard -- Paleoseismic Trenching -- Parametric Non-Stationary Random Vibration Modeling with SHM Applications -- Passive Control Techniques for Retrofitting of Existing Structures -- Probabilistic Seismic Hazard Models -- Probability Density Evolution Method in Stochastic Dynamics -- Radiocarbon Dating in Palaeoseismology -- Reconstruction Following Earthquake Disasters -- Recording Seismic Signals -- Reinforced Concrete Structures in Earthquake-resistant Construction -- Reliability Estimation and Analysis -- Remote Sensing in Seismology: An Overview -- Resiliency of Water, Wastewater, and Inundation Protection Systems -- Resourcing Issues Following Earthquake Disasters -- Response Spectrum Analysis of Structures Subjected to Seismic Actions -- Response Variability and Reliability of Structures -- Retrofitting and Strengthening Masonries of Heritage Structures: Materials Used -- Retrofitting and Strengthening Measures: Liability and Quality Assurance -- Retrofitting and Strengthening of Contemporary Structures: Materials Used -- Retrofitting and Strengthening of Structures: Basic Principles of Structural Interventions -- Review and Implications of Inputs for Seismic Hazard Analysis -- Robust Control of Building Structures under Uncertain Conditions -- Robust Design Optimization for Earthquake Loads -- Rocky coasts, Palaeoseismology of -- Safety Assessment of Buildings in Liquefiable Soils: Mathematical Tool -- SAR images, Interpretation of -- Seismic Actions due to Near-Fault Ground Motion -- Seismic Analysis of Masonry Buildings: Numerical Modeling -- Seismic Analysis of Masonry Infilled Concrete Buildings: Numerical Modeling -- Seismic Analysis of Steel and Composite Bridges: Numerical Modeling -- Seismic Analysis of Steel-Concrete Composite Buildings: Numerical Modeling -- Seismic Analysis of Wind Energy Converters -- Seismic Anisotropy in Volcanic Regions -- Seismic Data, Quality of -- Seismic Instrument Response, Correction for -- Seismic Noise -- Seismic Robustness Analysis of Nuclear Power Plants -- Seismometer Arrays -- Seismometer Self Noise and Test -- Seismometer, Extended Response -- Sensitivity of First Excursion Probabilities for Non-linear Stochastic Dynamical Systems -- Sensors,

Calibration of -- Site Response: 1D Time Domain Analyses -- Site Response: Comparison between Theory and Observation -- Spatial Filtering for Structural Health Monitoring -- Spatial Variability of Ground Motion: Seismic Analysis -- Stochastic Analysis of Linear Systems -- Stochastic Structural Identification from Vibrational and Environmental Data -- Strengthening Techniques: Bridges -- Strengthening Techniques: Masonry and Heritage Structures -- Structural Design Codes of Australia and New Zealand: Seismic Actions -- Subset Simulation Method for Rare Event Estimation -- Sustained Earthquake Preparedness: Functional, Social, and Cultural Issues -- System and Damage Identification of Civil Structures -- Timber Structures -- Time History Seismic Analysis -- Tuned Mass Dampers for Passive Control of Structures under Earthquake Excitations -- Uncertainty Theories, Overview -- Urban Change Monitoring: Multi-temporal SAR Images -- Volcano-Tectonic Seismicity of Soufriere Hills Volcano, Montserrat -- Waste Management Following Earthquake Disastersay Title.

Sommario/riassunto

The Encyclopedia of Earthquake Engineering is designed to be the authoritative and comprehensive reference covering all major aspects of the science of earthquake engineering, specifically focusing on the interaction between earthquakes and infrastructure. The encyclopedia comprises approximately 265 contributions. Since earthquake engineering deals with the interaction between earthquake disturbances and the built infrastructure, the emphasis is on basic design processes important to both non-specialists and engineers so that readers become suitably well-informed without needing to deal with the details of specialist understanding. The content of this encyclopedia provides technically inclined and informed readers about the ways in which earthquakes can affect our infrastructure and how engineers would go about designing against, mitigating and remediating these effects. The coverage ranges from buildings, foundations, underground construction, lifelines and bridges, roads, embankments and slopes. The encyclopedia also aims to provide cross-disciplinary and cross-domain information to domain-experts. This is the first single reference encyclopedia of this breadth and scope that brings together the science, engineering and technological aspects of earthquakes and structures.