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Autore	Cimellaro Gian Paolo
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Nota di contenuto	Applications and recent studies on seismic isolation in Italy -- State of the Art in Application of Seismic Isolation and Energy Dissipation in Turkey -- Seismic isolation applications in Romania -- Efforts toward International Harmonization of Seismic Isolation Design Code and Current Status in Japan -- Recent development and application on seismic isolation, energy dissipation and vibration control in China -- Recent Developments and Applications of Seismic Isolation in North America -- Seismic Isolation in Chile: An opportunity for Model Codes Calibration -- Optimization as a tool for seismic protection of

structures -- Near-fault earthquake ground motion and seismic isolation design -- Origin of seismicity in Italy as a clue for seismic hazard -- Seismic Isolation Design for Achieving Resilient Structures -- Mechanical properties of thick rubber bearing used in over-track buildings -- Bidirectional Model for Shear Behavior of High Damping Rubber Bearings -- Development of an Improved Deformation History Integral Type Hysteresis Model for High-Damping Rubber Bearings -- Application of Isolation in Large Scale Infrastructure in Cold Region in China -- Experimental and analytical investigation of variable curvature and friction pendulum isolator -- Experimental Investigation on Hysteretic Behavior of a Double Friction Pendulum and Frictional Heating -- An Experimental Study on the Effects of Different Pendulum Damper Designs on Structural Behavior -- Effect of over-stroke capacity of curved surface sliders on the collapse safety of seismically isolated buildings -- Development of Seismic Isolation and Energy Dissipation in Taiwan --Application, Research and Design -- Crescent Shaped Brace devices to strengthen pinned beam-column connections via semi-rigid CSB joints -- Reliability Based Design Optimization of Damped-Outrigger Timber Structure Using Stochastic Spectral Embedding Based Probability Density Evolution Method -- RESEARCH ON THE DEVELOPMENT OF THE THREE-DIMENSION SEISMIC ISOLATION SYSTEM FOR LIGHTWEIGHT BUILDINGS -- Numerical Assessment of Ultra-Low Cycle Fatigue Performance of Buckling Restrained Aluminum Shear Yielding Dampers -- Seismic Isolation Design Comparison of Japan, China, USA and Eurocode -- Statistical analysis of rubber compounds material tests for seismic isolation bearings and code provisions comparison -- CODE PROVISIONS ABOUT -FACTORS OF HDRBs FOR THE UPPER AND LOWER BOUND ANALYSES: HISTORICAL REVIEW -- Design of Base-Isolated Building as per Indian Code Provisions and Practices -- Complex Modal Shapes Superposition Response Spectrum Based Design Method for Seismically isolated structures in China -- Hidden pitfalls in Double Curved Surface Sliders (DCSS) -- Full scale dynamic tests on concave curved surface sliders: comparison of time history and cyclic sinusoidal tests -- Seismic Isolation of Bridges: Practice-Oriented Considerations -- Effects of Ice and Water and Contamination on Friction Pendulum Bearings -- Structural Response of a Bridge Seismically Isolated with Lead Rubber Bearings Exposed to Low Temperature -- Seismic Design and Performance Assessment of the Post-tensioned Bridge Piers -- Seismic Performance of Isolated Bridges under Extreme Shaking -- The role of an advanced quality system for the control of performance of Lead Rubber Bearings: the case of Puente Industrial de Biobio -- The Bridges on Çanakkale Highway: a huge application of the seismic protection technology in Europe -- Fluid viscous dampers for the 1915 Çanakkale Bridge in Turkey -- APPLICATION OF THE GRADIENT BASED OPTIMIZATION TO THE STRUCTURAL SYSTEMS WITH THE SUPPLEMENTAL DAMPING DEVICES -- 3-D Seismic Isolation for Operational Level Protection of Critical Electrical and Electronic Control Equipment for the Site C Clean Energy Project -- A Comparative Study on Isolator Modeling Approaches -- Seismic base isolation of a strategic historic masonry building -- Multi-Storey Building Retrofit by ADAS-Equipped Braces -- The effect of nonlinear response of the primary system in nonconventional TMDs -- Isolated Artificial Ground for the Seismic Safety in the Urban Reconstruction of Castelluccio di Norcia -- Numerical application of viscoelastic devices for improving the out-of-plane behaviour of a historic masonry building -- State-of-the-art of Resilience using bibliometric analysis -- Observed seismic behaviour of base isolation systems in Italy -- Versatile aseismic isolation based on

practical applications of advanced materials for sustainable resilience against earthquakes -- Seismic Isolation of the Terminal Core Roof at the Portland International Airport -- Coupling of structural additions for the mitigation of seismic response in existing buildings -- Verification of Actual Displacement Scaled Displacement-control System with High-static-low-dynamic Stiffness and Rotational Inertia for Seismic Isolation -- Improved Structural Serviceability And Seismic Protection By Adaptive Isolators and Dampers -- Preliminary results in the design and testing of earthquake-proof glass-aluminium partition walls -- Preliminary results in the design and testing of earthquake-resistant school furniture -- Experimental seismic response characterisation of brackets for use in ventilated façade systems -- Shake table tests on a new passively controlled system with pulley amplification mechanisms for suspended ceilings -- Advanced Digital Video Analyses to Estimate the Dynamic Behavior for Proper Design of a Base-Isolation System of the Sarcophagus of the Spouses at the National Etruscan -- Seismic protection of the Goddess of Morgantina statue through an innovative base-isolation device: validation by shake-table tests -- Base-isolation of a rocking object on a rocking pedestal: response to pulse-type ground motion -- Stepwise Performance Enhancement of Sloped Rolling-type Isolators -- A Shake Table Testing Campaign of Electrical Cabinets -- Effects of the vertical and horizontal acceleration on the seismic response of piping networks -- Seismic vulnerability of pallet storage systems -- A simplified framework to generate fragility functions for in-plane behavior of gypsum partition walls -- Dynamic Characterization of glazed partition walls by Operational Modal Analysis technique -- Dynamic characterization and damage detection of a fire-protection piping system -- A Rapid Visual Screening procedure to evaluate seismic risk of non-structural elements in critical facilities -- Comparison of seismic losses associated with traditional/innovative hollow brick and plasterboard internal partitions -- Vibration-based test results for the investigation of the infill masonry wall damage -- Dynamic properties and seismic response of a museum display case with an art object -- EXPERIMENTAL STUDY ON CEILING FALL PREVENTION USING NEW MATERIALS -- Shake-Table Tests on an Industrial Steel Rack Isolated with Innovative Modular Devices -- On the use of CLT infills to improve the lateral performance of RC frames -- Required response spectra and acceleration loading histories for seismic assessment of acceleration-sensitive nonstructural elements according to the Italian building code -- Multi-EDP performance assessment of a steel BRBF under ground motion sequences -- Modern Systems for Wind & Seismic Induced Vibrations -- Enhancing Stiffness and/or Damping in Structural Systems with Cellular Shear Walls -- Development of new optimal passive non-detuning Mass Dampers -- Challenges and Detailing Considerations for the Incorporation of Passive Energy Dissipation Systems in Life Science Occupancies -- Seismic Isolation in the US Mission Critical Sector -- The brittle failure of fluid viscous dampers and the related consequences on the reliability of a medium-rise steel building -- Preliminary numerical analysis of the response of base-isolated SDOF systems constrained by two deformable devices under seismic excitations -- Seismic retrofit of r.c. buildings with base isolation -- Advanced constitutive laws for nonlinear static analyses of masonry structures -- Seismic response spectra of the 24th August 2016 Amatrice earthquake -- Assessment of the acceleration floor spectra through dynamic identification: the Museum of Bargello in Florence -- Experimental evaluation of the cyclic behaviour of different smooth rebar anchoring layouts -- Dynamic characterization and

seismic vulnerability assessment of existing masonry port structures -- Horizontal and vertical BIM interoperability aimed at seismic vulnerability assessment -- Automating the Frequency Domain Decomposition Technique using the Modal Assurance Criterion.

Sommario/riassunto

This volume gathers the proceedings of the 17th World Conference on Seismic Isolation (17WCSI), held in Turin, Italy on September 11-15, 2022. Endorsed by ASSISI Association (Anti-Seismic Systems International Society), the conference discussed state-of-the-art information as well as emerging concepts and innovative applications related to seismic isolation, energy dissipation and active vibration control of structures, resilience and sustainability. The volume covers highly diverse topics, including earthquake-resistant construction, protection from natural and man-made impacts, safety of structures, vulnerability, international standards on structures with seismic isolation, seismic isolation in existing structures and cultural heritage, seismic isolation in high rise buildings, seismic protection of non-structural elements, equipment and statues. The contributions, which are published after a rigorous international peer-review process, highlight numerous exciting ideas that will spur novel research directions and foster multidisciplinary collaboration among different specialists.
