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Nota di contenuto	List of Contributors -- About the Guest Editors -- Preface to "Acoustic and Elastic Waves: Recent Trends in Science and Engineering" -- The Ultrasonic Polar Scan for Composite Characterization and Damage Assessment: Past, Present and Future -- Dispersion of Functionalized Silica Micro- and Nanoparticles into Poly(nonamethylene Azelate) by Ultrasonic Micro-Molding -- Enhancement of Spatial Resolution Using a Metamaterial Sensor in Nondestructive Evaluation -- Monitoring Techniques of Cerium Stabilized Zirconia for Medical Prostheses -- Correlation between Earthquakes and AE Monitoring of Historical Buildings in Seismic Areas -- Electromagnetic Acoustic Transducers Applied to High Temperature Plates for Potential Use in the Solar Thermal Industry -- Acoustic Emission Activity for Characterizing Fracture of Marble under Bending -- Lamb Wave Interaction with Adhesively Bonded Stiffeners and Disbonds Using 3D Vibrometry -- Proof of Concept of Crack Localization Using Negative Pressure Waves in Closed Tubes for Later Application in Effective SHM System for Additive Manufactured Components -- Identification of a Critical Time with Acoustic Emission Monitoring during Static Fatigue Tests on Ceramic Matrix Composites: Towards Lifetime Prediction -- Wavelet Packet Decomposition to Characterize Injection Molding Tool Damage -- Dynamic Characterization of Cohesive Material Based on Wave Velocity Measurements -- Design of a Stability Augmentation System for an Unmanned Helicopter Based on Adaptive Control Techniques -- Numerical and Experimental Characterization of Fiber-Reinforced

Thermoplastic Composite Structures with Embedded Piezoelectric Sensor-Actuator Arrays for Ultrasonic Applications -- Acoustic Emissions to Measure Drought-Induced Cavitation in Plants -- The Stiffness and Damping Characteristics of a Dual-Chamber Air Spring Device Applied to Motion Suppression of Marine Structures -- Correlation of Plastic Strain Energy and Acoustic Emission Energy in Reinforced Concrete Structures -- Numerical Models for the Assessment of Historical Masonry Structures and Materials, Monitored by Acoustic Emission -- Detecting the Presence of High Water-to-Cement Ratio in Concrete Surfaces Using Highly Nonlinear Solitary Waves -- Opto-Acoustic Method for the Characterization of Thin-Film Adhesion -- On Site Investigation and Health Monitoring of a Historic Tower in Mantua, Italy.

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**Sommario/riassunto**

The present Special Issue intends to explore new directions in the field of acoustics and ultrasonics. The interest includes, but is not limited to, the use of acoustic technology for condition monitoring of materials and structures. Topics of interest (among others): {u2022} Acoustic emission in materials and structures (without material limitation) {u2022} Innovative cases of ultrasonic inspection {u2022} Wave dispersion and waveguides {u2022} Monitoring of innovative materials {u2022} Seismic waves {u2022} Vibrations, damping and noise control {u2022} Combination of mechanical wave techniques with other types for structural health monitoring purposes. Experimental and numerical studies are welcome.

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