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Titolo	Fundamentals of Nanomechanical Resonators // by Silvan Schmid, Luis Guillermo Villanueva, Michael Lee Roukes
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Soggetti	Nanotechnology Nanoelectromechanical systems Microtechnology Microelectromechanical systems Microresonators (Optoelectronics) Nanoengineering Nanoscale Devices Microsystems and MEMS Microresonators
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Lumped-Element Model Resonators -- Continuum Mechanical Resonators -- Damping -- Transduction -- Responsivity -- Measurements and Noise.
Sommario/riassunto	Now in an updated second edition, this classroom-tested textbook introduces and summarizes the latest models and skills required to design and optimize nanomechanical resonators, taking a top-down approach that uses macroscopic formulas to model the devices. The authors cover the electrical and mechanical aspects of nanoelectromechanical system (NEMS) devices in six expanded and revised chapters on lumped-element model resonators, continuum mechanical resonators, damping, transduction, responsivity, and measurements and noise. The applied approach found in this book is appropriate for engineering students and researchers working with

micro and nanomechanical resonators. Reviews key research on the design and fabrication of micro and nanomechanical resonators; Provides a complete set of mechanical models; Maximizes reader insight into sensing, transduction, and noise and measurements.
