



Piezoelectric-Based Vibration Control: From Macro to Micro/Nano Scale Systems

By Nader Jalili

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Editorial Review

From the Back Cover

Piezoelectric-Based Vibration Control: From Macro to Micro/Nano Scale Systems covers a comprehensive understanding and physical principles in piezoelectric materials and structures used in a variety of vibration-control systems. With its self-contained and single-source style, this book provides a widespread spectrum of discussions ranging from fundamental concepts of mechanical vibration analysis and control to piezoelectric actuators and sensors. Starting from an elementary level in mechanical vibrations, this book

- Offers the reader a detailed discussion of vibration of continuous systems as a single-source book,
- Provides actual actuator and sensor configurations, along with illustrative hands-on problems and examples that can be applied by the reader, and
- Covers advanced topics in piezoelectric-based micro/nano actuators and sensors with applications ranging from precision mechatronics to molecular recognition and functional nanostructures.

Piezoelectric-Based Vibration Control: From Macro to Micro/Nano Scale Systems, with its easy-to-follow format, is a must-read for all engineers working in the areas of vibration control and piezoelectric systems, undergraduate students interested in fundamental of vibrations and control, up to graduate students and researchers working on advanced piezoelectric-based vibration-control systems.

About the Author

Nader Jalili is currently an Associate Professor of Mechanical and Industrial Engineering at Northeastern University. Previously he served as an Associate Professor of Mechanical Engineering at Clemson University. He received a Ph.D. degree in 1988, from the University of Connecticut. His present research works are chiefly on piezoelectric-based sensors/actuators, nanocomposites, piezoelectric-based nano-stager for microscopy applications, vibration control in automobiles, and e-textiles Founding Chair, Technical Committee on Vibration and Control of Smart Structures, ASME Dynamic Systems and Control Division (DSCD) .

He's currently Associate Editor, ASME Transactions on Dynamic Systems, Measurements and Control and the Technical Editor, IEEE/ASME Transaction on Mechatronics. He's published over 45 journal articles and was a recipient of an NSF Young Investigator Career Award in 2003 for his work in the area of nanomanufacturing.

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