



VIBRATION CONTROL FOR OPTOMECHANICAL SYSTEMS



By Vyacheslav M Ryaboy (MKS Instruments, USA)

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ABOUT THE BOOK

Vibration presents a major challenge to advanced experiments and technological processes in engineering, physics and life sciences that rely on optics and optoelectronics. This compendium discusses ways in which vibration may affect optical performance and describes methods and means of reducing this impact. Principal methods of vibration control, namely, damping and isolation are highlighted using mathematical models and real-life examples.

The unique text covers some topics that are important for optomechanical applications but are lacking in general vibration texts, such as dynamics and stability of elastically supported systems with high centers of gravity, physics of pneumatic isolators, and application of dynamic absorbers to vibration-isolated systems.

This useful reference book enables the reader to apply the vibration control tools properly and perform basic analytical and experimental tasks of estimating and verifying their performance. It is also a must-have textbook for undergraduate or graduate-level courses in vibration control and optomechanics.

READERSHIP

Professionals, academics, researchers, and graduate students in mechanical engineering, acoustics, optics, systems engineering and control.

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