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2.11 Response of a thin rectangular simply supported plate to an arbitrary oscillating force distribution2.12 Vibration of infinite thin cylinders; 2.13 Free vibration of finite thin cylinders; 2.14 Harmonic forced vibration of infinite thin cylinders; Chapter 3. Feedback Control; 3.1 Introduction; 3.2 Single-channel feedback control; 3.3 Stability of a single-channel system; 3.4 Modification of the response of an SDOF system; 3.5 The effect of delays in the feedback loop; 3.6 The state variable approach; 3.7 Example of a two-degree-of-freedom system; 3.8 Output feedback and state feedback
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5.4 Piezoelectric one-dimensional asymmetric wafer actuators5.5 Piezoelectric one-dimensional anti-symmetric wafer actuators; 5.6 Piezoelectric two-dimensional anti-symmetric wafer actuators; 5.7 Piezoelectric distributed sensors; 5.8 Modal estimation with arrays of point sensors; 5.9 Wavenumber estimation with arrays of point sensors; 5.10 Wave vector filtering with arrays of point sensors; 5.11 Shape memory alloy actuators and sensors; Chapter 6. Active Control of Vibration in Structures; 6.1 Introduction; 6.2 Feedforward control of finite structures
6.3 Feedback control of finite structures

Sommario/riassunto

This book is a companion text to Active Control of Sound by P.A. Nelson and S.J. Elliott, also published by Academic Press. It summarizes the principles underlying active vibration control and its practical applications by combining material from vibrations, mechanics, signal processing, acoustics, and control theory. The emphasis of the book is on the active control of waves in structures, the active isolation of vibrations, the use of distributed strain actuators and sensors, and the active control of structurally radiated sound. The feedforward control of deterministic disturbances,