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Titolo	Adverse reproductive outcomes in families of atomic veterans [[electronic resource]] : the feasibility of epidemiologic studies // Committee to Study the Feasibility of, and Need for, Epidemiologic Studies of Adverse Reproductive Outcomes in the Families of Atomic Veterans, Medical Follow-up Agency, Institute of Medicine
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1995
ISBN	1-280-19267-4 9786610192670 0-309-58848-0 0-585-14335-8
Descrizione fisica	x, 97 p
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Soggetti	Radiation - Physiological effect Veterans - Diseases Radiation victims Teratogenesis Abnormalities, Human Electronic books.
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2. Record Nr.	UNINA9910782116503321
Autore	Moheimani S. O. Reza <1967->
Titolo	Spatial control of vibration [[electronic resource]] : theory and experiments // S.O. Reza Moheimani, Dunant Halim, Andrew J. Fleming
Pubbl/distr/stampa	Singapore, : World Scientific, c2003
ISBN	1-62870-536-1 1-281-93442-9 9786611934422 981-279-428-X
Descrizione fisica	1 online resource (237 p.)
Collana	Series on stability, vibration, and control of systems. Series A ; v. 10
Altri autori (Persone)	FlemingAndrew J HalimDunant
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Nota di contenuto	Preface; Contents; 1. Introduction; 1.1 Vibration; 1.2 Spatially distributed systems; 1.3 Model correction; 1.4 Spatial control; 1.5 Piezoelectric actuators and sensors; 1.6 Actuator and sensor placement; 2. Modeling; 2.1 Introduction; 2.2 Modal approach; 2.3 Transverse vibration of strings; 2.4 Axial vibration of rods; 2.5 Torsional vibration of shafts; 2.6 Flexural vibration of beams; 2.7 Transverse vibration of thin plates; 2.8 Modeling of piezoelectric laminate beams; 2.9 Conclusions; 3. Spatial Norms and Model Reduction; 3.1 Introduction; 3.2 Spatial H ₂ norm; 3.3 Spatial H _{oo} norm; 3.4 Weighted spatial norms; 3.5 State-space forms; 3.6 The balanced realization and model reduction by truncation; 3.7 Illustrative example; 3.8 Conclusions; 4. Model Correction; 4.1 Introduction; 4.2 Effect of truncation; 4.3 Model correction using the spatial H ₂ norm; 4.4 Extension to multi-input systems; 4.5 Model correction using the spatial H _{oo} norm; 4.6 Model correction for point-wise models of structures; 4.7 Extension to multi-variable point-wise systems; 4.8 Model correction for a piezoelectric laminate beam; 4.9 Conclusions; 5. Spatial Control; 5.1 Introduction

5.2 Spatial Hoo control problem5.3 Spatial Hoo control of a piezoelectric laminate beam; 5.4 Experimental implementation of the spatial Hoo controller; 5.5 The effect of pre-filtering on performance of the spatial Hoo controller; 5.6 The spatial H2 control problem; 5.7 Spatial H2 control of a piezoelectric laminate beam; 5.8 Experimental implementation of spatial H2 control; 5.9 Conclusions; 6. Optimal Placement of Actuators and Sensors; 6.1 Introduction; 6.2 Dynamics of a piezoelectric laminate plate; 6.3 Optimal placement of actuators; 6.4 Optimal placement of sensors
6.5 Optimal placement of piezoelectric actuators and sensors6.6 Numerical and experimental results; 6.7 Conclusions; 7. System Identification for Spatially Distributed Systems; 7.1 Introduction; 7.2 Modeling; 7.3 Spatial sampling; 7.4 Identifying the system matrix; 7.5 Identifying the mode shapes and feed-through function; 7.6 Experimental results; 7.7 Conclusions; Appendix A Frequency domain subspace system identification; A.1 Introduction; A.2 Frequency Domain Subspace Algorithm; Bibliography; Index

Sommario/riassunto

Vibration is a natural phenomenon that occurs in a variety of engineering systems. In many circumstances, vibration greatly affects the nature of engineering design as it often dictates limiting factors in the performance of the system. The conventional treatment is to redesign the system or to use passive damping. The former could be a costly exercise, while the latter is only effective at higher frequencies. Active control techniques have emerged as viable technologies to fill this low-frequency gap. This book is concerned with the study of feedback controllers for vibration control of flexi
