Contents

Preface	vii
An on-line parameter estimation scheme for flexible structures I. G. Rosen and M. A. Demetriou	1
On the dynamics and control of the space based flexible articulating system V. J. Modi, A. C. Ng, and F. Karray	25
Dissipative controller designs for second-order dynamic systems K. A. Morris and J. N. Juang	71
Nonlinear attitude control of planar structures in space using only internal controls MAHMUT REYHANOGLU AND N. HARRIS McClamroch	91
Frequency domain control designs for an ideal beam KATHRYN LENZ	101
Comparison of control strategies for the single flexible link DAVID WANG	113
On the development of an energy based controller for flexible structures FARID GOLNARAGHI	135
On dynamic mass capture by flexible robots G. R. HEPPLER	157
Well-posedness and stability of perturbed linear evolution equations	170
Kazufumi Ito Optimal active vibration absorber: design and experimental	179
results Gina Lee-Glauser, Jer-Nan Juang, and Jeffrey L. Sulla	197
Why characterise flexible structures? A radarsat project perspective SHABEER AHMED	215
Control and observation for flexible structures described by partial differential equations	
LAN RONTSEMA	227