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Nota di contenuto	Introduction -- Mathematical Preliminaries -- PDE Modeling for Flexible Manipulator -- Boundary Control Using Singular Perturbation Approach -- Robust boundary control of an axially moving system -- Adaptive boundary control of an axially moving system with high acceleration/deceleration -- Adaptive boundary control of an axially moving belt system with high acceleration/deceleration -- Boundary control of an axially moving accelerated/decelerated -- Stabilization of anaxially moving accelerated/decelerated system -- Adaptive output feedback boundary control -- Vibration control and boundary tension constraint of an axially moving string system -- Boundary Control for an Axially Moving System With Input Restriction Based on Disturbance Observers -- Adaptive Neural Network Vibration Control for an Output-Tension-Constrained Axially Moving Belt System With Input Nonlinearity -- Conclusion.
Sommario/riassunto	The main objectives of the book are to introduce the design method of boundary control strategies for the axially moving structures to reduce their vibration. This book provides the reader with a thorough grounding in the boundary controller design. Our goal is to provide advanced boundary controller design methods and their stability analysis methods and offer simulation examples and MATLAB programs for each boundary control algorithm. For each chapter, several

engineering application examples are given and the contents of each chapter in this book are independent, so that readers can just read their own needs. In this book, all the control algorithms and their programs are described separately and classified by the chapter name, which can be run successfully in MATLAB. The book can benefit researchers, engineers, and graduate students in the fields of PDE modeling and boundary vibration control of flexible structures.