

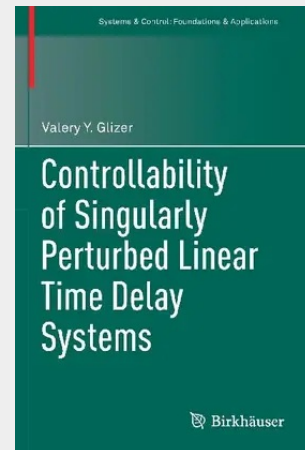
Controllability of Singularly Perturbed Linear Time Delay Systems

This monograph provides a comprehensive analysis of the control of singularly perturbed time delay systems. Expanding on the author's previous work on controllability of linear systems with delays in the state and control variables, this volume's comprehensive coverage makes it a valuable addition to the field. Each chapter is self-contained, allowing readers to study them independently or in succession.

After a brief introduction, the book systematically examines properties of different classes of singularly perturbed time delay systems, including linear time-dependent systems with multiple point-wise and distributed state delays. The author then considers more general singularly perturbed systems with state and control delays. Euclidean space controllability for all of these systems is also discussed, using numerous examples from real-life models throughout the text to illustrate the results presented. More technically complicated proofs are presented in separate subsections. The final chapter includes a section dedicated to non-linear time delay systems.

This book is ideal for researchers, engineers, and graduate students in systems science and control theory. Other applied mathematicians and researchers working in biology and medicine will also find this volume to be a valuable resource.

Introduction.- Singularly Perturbed Linear Time Delay Systems.- Euclidean Space Output Controllability of Linear Systems with State Delays.- Complete Euclidean Space Controllability of Linear Systems with State and Control Delays.- First-Order Euclidean Space Controllability Conditions for Linear Systems with Small State Delays.- Miscellanies



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