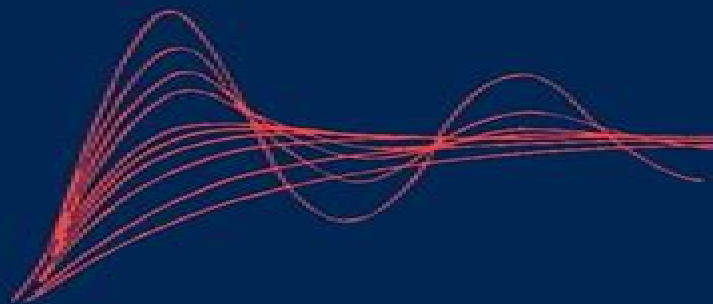


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Robust Control System Design Chia-Chi Tsui, 2022-06-01 This book presents a synthesized design principle versus the existing separation principle of modern control theory of over six decades since the start Guided by this new principle a generalized state feedback control can be designed based on the parameters of observer and for a great majority of plant systems and the robust property of this control can be fully realized The robust property of the existing state feedback control which is designed separate from the parameters of its realizing observer cannot be realized for a great majority of plant systems By freely design and adjust the observer order the corresponding generalized state feedback control can unify completely the existing state feedback control and static output feedback control and can adjust effectively the tradeoff between performance and robustness This generalized state feedback control can assign eigen structure and can improve performance and robustness far more effectively than the control designed using classical control theory Equally significant the results of this book are very simple that can be comprehended and grasped very easily These results are introduced and illustrated from the basic level and use only the basic mathematical tools Ample examples and exercise problems that can be solved by hand computation are provided This third edition made substantial improvement on this aspect Modern control theoreticians only formulated the feedback control design problem in

various ways the point however is to really solve this problem



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