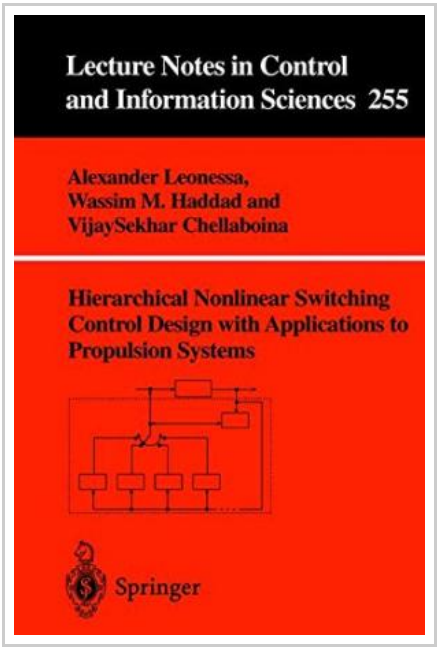

Hierarchical Nonlinear Switching Control Design with Applications to Propulsion Systems (Paperback)

By Alexander Leonessa, Wassim M. Haddad, VijaySekhar Chellaboina

Springer London Ltd, United Kingdom, 2000. Paperback. Book Condition: New. 2000 ed.. 234 x 156 mm. Language: English . Brand New Book ***** Print on Demand *****.This book presents a general nonlinear control design methodology for nonlinear uncertain dynamical systems. Specifically, a hierarchical nonlinear switching control framework is developed that provides a rigorous alternative to gain scheduling control for general nonlinear uncertain systems. The proposed switching control design framework accounts for actuator saturation constraints as well as system modeling uncertainty. The efficacy of the control design approach is extensively demonstrated on aeroengine propulsion systems. In particular, dynamic models for rotating stall and surge in axial and centrifugal flow compression systems that lend themselves to the application of nonlinear control design are developed and the hierarchical switching control framework is then applied to control the aerodynamic instabilities of rotating stall and surge. For the researcher who is entering the field of hierarchical switching robust control this book provides a plethora of new research directions. Alternatively, for researchers already active in the field of hierarchical control and hybrid systems, this book can be used as a reference to a significant body of recent work. Furthermore, control practitioners involved with nonlinear control design...

Reviews

Complete guideline for publication fans. I am quite late in start reading this one, but better then never. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- ***Llewellyn Terry***

The most effective publication i ever read through. I could possibly comprehended almost everything using this composed e pdf. I am very easily could get a enjoyment of reading through a composed pdf.

-- ***Opal Bauch V***