



Stability and Stabilization of Linear Systems with Saturating Actuators (Hardback)

By Sophie Tarbouriech, Germain Garcia, Jo O Manoel Gomes Da Silva

Springer London Ltd, United Kingdom, 2011. Hardback. Book Condition: New. 2011 ed.. 234 x 160 mm. Language: English . Brand New Book. This monograph details basic concepts and tools fundamental for the analysis and synthesis of linear systems subject to actuator saturation and developments in recent research. The authors use a state-space approach and focus on stability analysis and the synthesis of stabilizing control laws in both local and global contexts. Different methods of modeling the saturation and behavior of the nonlinear closed-loop system are given special attention. Various kinds of Lyapunov functions are considered to present different stability conditions. Results arising from uncertain systems and treating performance in the presence of saturation are given. The text proposes methods and algorithms, based on the use of linear programming and linear matrix inequalities, for computing estimates of the basin of attraction and for designing control systems accounting for the control bounds and the possibility of saturation. They can be easily implemented with mathematical software packages.



READ ONLINE
[3.04 MB]

Reviews

This is the finest book i have got study right up until now. I am quite late in start reading this one, but better then never. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- **Keanu Johns**

This is the finest book i have read until now. It is filled with wisdom and knowledge You can expect to like just how the author compose this ebook.

-- **Tobin Lesch**