

Librería
Bonilla y Asociados
desde 1950



Título: Feedback Systems: An Introduction For Scientists And Engineers

Autor: Karl Johan Aström

Precio: \$790.00

Editorial:

Año: 2008

Tema:

Edición: 1^a

Sinopsis

ISBN: 9780691135762

This book provides an introduction to the mathematics needed to model, analyze, and design feedback systems. It is an ideal textbook for undergraduate and graduate students, and is indispensable for researchers seeking a self-contained reference on control theory. Unlike most books on the subject, Feedback Systems develops transfer functions through the exponential response of a system, and is accessible across a range of disciplines that utilize feedback in physical, biological, information, and economic systems.

Karl Åström and Richard Murray use techniques from physics, computer science, and operations research to introduce control-oriented modeling. They begin with state space tools for analysis and design, including stability of solutions, Lyapunov functions, reachability, state feedback observability, and estimators. The matrix exponential plays a central role in the analysis of linear control systems, allowing a concise development of many of the key concepts for this class of models. Åström and Murray then develop and explain tools in the frequency domain, including transfer functions, Nyquist analysis, PID control, frequency domain design, and robustness. They provide exercises at the end of every chapter, and an accompanying electronic solutions manual is available. Feedback Systems is a complete one-volume resource for students and researchers in mathematics, engineering, and the sciences.

Covers the mathematics needed to model, analyze, and design feedback systems

Serves as an introductory textbook for students and a self-contained resource for researchers

Includes exercises at the end of every chapter

Features an electronic solutions manual

Offers techniques applicable across a range of disciplines