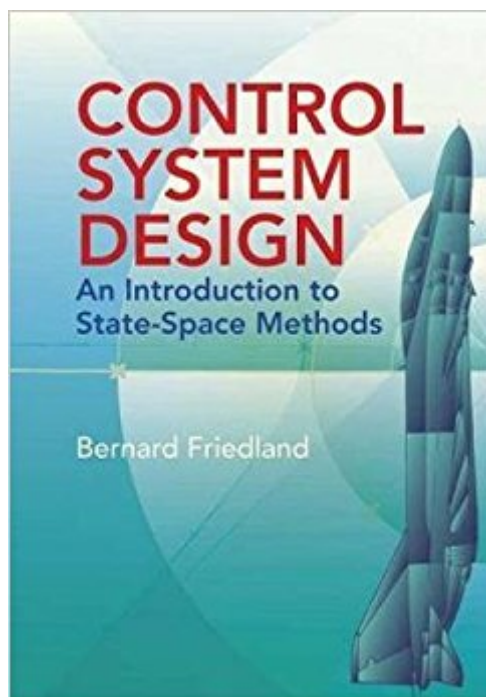




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# Control System Design: An Introduction To State-Space Methods (Dover Books On Electrical Engineering)



## Synopsis

Addressed not only to students but also to professional engineers and scientists, this volume introduces state-space methods for direct applications to control system design, in addition to providing background for reading the periodical literature. Its presentation, therefore, is suitable both for those who require methods for achieving results and those more interested in using results than in proving them. Topics include feedback control; state-space representation of dynamic systems and dynamics of linear systems; frequency-domain analysis; controllability and observability; and shaping the dynamic response. Additional subjects encompass linear observers; compensator design by the separation principle; linear, quadratic optimum control; random processes; and Kalman filters. Concrete examples of how state-space methods can be used to advantage in several representative applications are woven into the fabric of the text and the homework problems. Many of the models are drawn from aerospace and inertial instrumentation; other examples are derived from chemical process control, maritime operations, robotics, and energy systems.

## Book Information

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## Customer Reviews

Better have a background in SSM before attempting to decipher this book. Not an intuitive approach to control system theory versus classical methods. Get the book from Nise or Bishop to get acquainted with state-space before tackling this one.

Helpful reference for State Space modeling with interesting time invariant examples. I used this book to prep for a linear system theory/ modern control graduate course.

A well written and detailed book on state-space methods, with tons of applications on engineering. Unfortunately, it does not provide treatments for discrete time state-space method.

Great book. Simple to understand with a lot of example

Book is outstanding but equations in the e-version is all messed up - makes reading difficult. Publishers need to look into this.

Beautiful proportion of explanation and formulae - I also learnt easily , compared to other books on this subject, I recommend it for people like myself

I'm a professor who has taught out of this text twice for a graduate-level course on state space and modern control. This text is a joy to use - well written, clearly explained examples, and well thought out organization. I highly recommend it!

Very good

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