



Introduction to Stochastic Control Theory

By Karl J. Astrom

Dover Publications. Paperback. Book Condition: New. Paperback. 318 pages. Dimensions: 8.4in. x 5.3in. x 0.8in. This text for upper-level undergraduates and graduate students explores stochastic control theory in terms of analysis, parametric optimization, and optimal stochastic control. Limited to linear systems with quadratic criteria, it covers discrete time as well as continuous time systems. The first three chapters provide motivation and background material on stochastic processes, followed by an analysis of dynamical systems with inputs of stochastic processes. A simple version of the problem of optimal control of stochastic systems is discussed, along with an example of an industrial application of this theory. Subsequent discussions cover filtering and prediction theory as well as the general stochastic control problem for linear systems with quadratic criteria. Each chapter begins with the discrete time version of a problem and progresses to a more challenging continuous time version of the same problem. Prerequisites include courses in analysis and probability theory in addition to a course in dynamical systems that covers frequency response and the state-space approach for continuous time and discrete time systems. This item ships from multiple locations. Your book may arrive from Roseburg, OR, La Vergne, TN. Paperback.



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