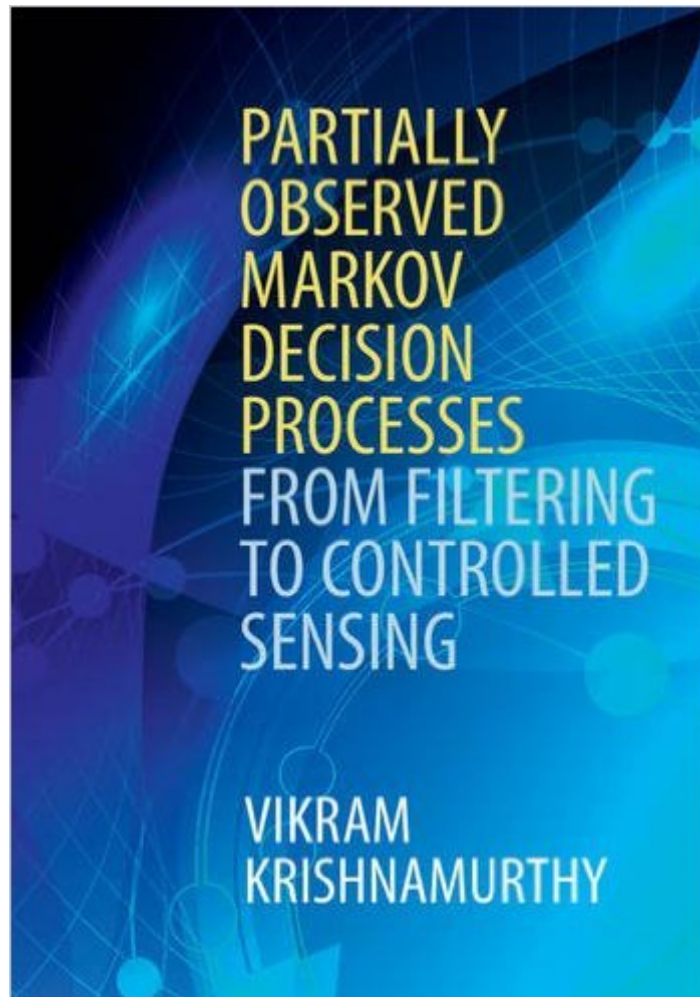


The book was found

Partially Observed Markov Decision Processes: From Filtering To Controlled Sensing



Synopsis

Covering formulation, algorithms, and structural results, and linking theory to real-world applications in controlled sensing (including social learning, adaptive radars and sequential detection), this book focuses on the conceptual foundations of partially observed Markov decision processes (POMDPs). It emphasizes structural results in stochastic dynamic programming, enabling graduate students and researchers in engineering, operations research, and economics to understand the underlying unifying themes without getting weighed down by mathematical technicalities. Bringing together research from across the literature, the book provides an introduction to nonlinear filtering followed by a systematic development of stochastic dynamic programming, lattice programming and reinforcement learning for POMDPs. Questions addressed in the book include: when does a POMDP have a threshold optimal policy? When are myopic policies optimal? How do local and global decision makers interact in adaptive decision making in multi-agent social learning where there is herding and data incest? And how can sophisticated radars and sensors adapt their sensing in real time?

Book Information

Hardcover: 488 pages

Publisher: Cambridge University Press; 1 edition (March 21, 2016)

Language: English

ISBN-10: 1107134609

ISBN-13: 978-1107134607

Product Dimensions: 6.8 x 1 x 9.7 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (1 customer review)

Best Sellers Rank: #1,255,799 in Books (See Top 100 in Books) #123 inÂ Books > Science &

Math > Mathematics > Applied > Stochastic Modeling #200 inÂ Books > Engineering &

Transportation > Engineering > Telecommunications & Sensors > Signal Processing #2677

inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics

Customer Reviews

Professor Krishnamurthy's book achieves an excellent balance between the required rigor to understand the principles behind Partially Observed Markov Decision Processes (POMDPs) and their practical application to various engineering problems from optimal scheduling of sensors such as radar to social learning. As somebody with a post-graduate EE background in statistical signal

processing, but without formal training in POMPDs (I'm too old!), I found the book to be challenging but readable (you will need a paper and pencil to work through it). The book brings together a lot of material in a unified framework. Don't miss the online resources including problems - they are valuable.

[Download to continue reading...](#)

Partially Observed Markov Decision Processes: From Filtering to Controlled Sensing Semigroups, Boundary Value Problems and Markov Processes (Springer Monographs in Mathematics) Lectures from Markov Processes to Brownian Motion (Springer Advanced Texts in Life Sciences) Critical Thinking: Decision Making with Smarter Intuition and Logic! (Critical Thinking, Decision Making, Logic, Intuition) Colonial Kenya Observed: British Rule, Mau Mau and the Wind of Change The Concise Book of Mitzvot: The Commandments Which Can Be Observed Today / Sefer ha-Mitzvot ha-Katzar: Kolel bo ha-mitsvot 'aseh we-lo'-ta'aseh ... (English and Hebrew Edition) A Buddhist Grief Observed Markov Models for Pattern Recognition: From Theory to Applications Markov Chains and Stochastic Stability (Cambridge Mathematical Library) Bayesian Signal Processing: Classical, Modern and Particle Filtering Methods (Adaptive and Cognitive Dynamic Systems: Signal Processing, Learning, Communications and Control) Ending Spam: Bayesian Content Filtering and the Art of Statistical Language Classification Microsoft Excel 2010 Tables, PivotTables, Sorting & Filtering Quick Reference Guide (Cheat Sheet of Instructions, Tips & Shortcuts - Laminated Card) Hack Your Mind to Become Bulletproof: How to control perceptive filtering, create happiness on command, interrupt destructive patterns, unlock the power ... to Create a New Future Series Book 1) Adaptive Filtering Prediction and Control (Dover Books on Electrical Engineering) Detection Estimation and Modulation Theory, Part I: Detection, Estimation, and Filtering Theory Computer-Controlled Systems: Theory and Design (3rd Edition) Make a Raspberry Pi-Controlled Robot: Building a Rover with Python, Linux, Motors, and Sensors Learn and Apply Pocketbook: Top 200 Drugs, Controlled Drugs, Medical Abbreviations in Less than 2 weeks Introduction to Plasma Physics and Controlled Fusion ISO 14644-1:1999, Cleanrooms and associated controlled environments -- Part 1: Classification of air cleanliness

[Dmca](#)