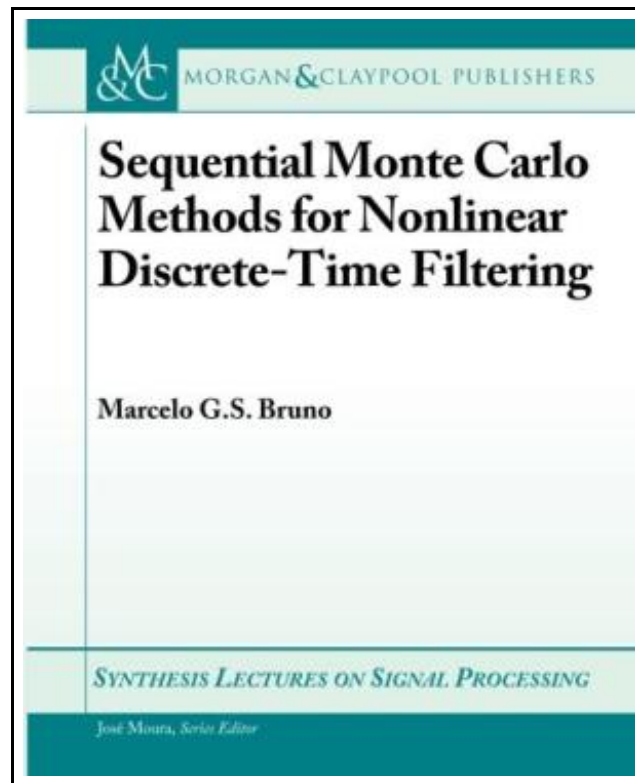


Sequential Monte Carlo Methods for Nonlinear Discrete-Time Filtering



Filesize: 8.62 MB

Reviews

These types of book is the greatest ebook readily available. I was able to comprehend every little thing using this published e pdf. I realized this pdf from my dad and i encouraged this publication to discover.

(Dr. Porter Mitchell)

SEQUENTIAL MONTE CARLO METHODS FOR NONLINEAR DISCRETE-TIME FILTERING



Morgan & Claypool. Paperback. Book Condition: New. Paperback. 100 pages. Dimensions: 9.2in. x 7.5in. x 0.2in. In these notes, we introduce particle filtering as a recursive importance sampling method that approximates the minimum-mean-square-error (MMSE) estimate of a sequence of hidden state vectors in scenarios where the joint probability distribution of the states and the observations is non-Gaussian and, therefore, closed-form analytical expressions for the MMSE estimate are generally unavailable. We begin the notes with a review of Bayesian approaches to static (i. e. , time-invariant) parameter estimation. In the sequel, we describe the solution to the problem of sequential state estimation in linear, Gaussian dynamic models, which corresponds to the well-known Kalman (or Kalman-Bucy) filter. Finally, we move to the general nonlinear, non-Gaussian stochastic filtering problem and present particle filtering as a sequential Monte Carlo approach to solve that problem in a statistically optimal way. We review several techniques to improve the performance of particle filters, including importance function optimization, particle resampling, Markov Chain Monte Carlo move steps, auxiliary particle filtering, and regularized particle filtering. We also discuss Rao-Blackwellized particle filtering as a technique that is particularly well-suited for many relevant applications such as fault detection and inertial navigation. Finally, we conclude the notes with a discussion on the emerging topic of distributed particle filtering using multiple processors located at remote nodes in a sensor network. Throughout the notes, we often assume a more general framework than in most introductory textbooks by allowing either the observation model or the hidden state dynamic model to include unknown parameters. In a fully Bayesian fashion, we treat those unknown parameters also as random variables. Using suitable dynamic conjugate priors, that approach can be applied then to perform joint state and parameter estimation. Table of Contents: Introduction Bayesian Estimation of Static Vectors The Stochastic Filtering...



[Read Sequential Monte Carlo Methods for Nonlinear Discrete-Time Filtering Online](#)

[Download PDF Sequential Monte Carlo Methods for Nonlinear Discrete-Time Filtering](#)

Related Books



Angels Among Us: 52 Humorous and Inspirational Short Stories: Lifes Outtakes - Year 7

Publishing Inspiration. Paperback. Book Condition: New. This item is printed on demand. Paperback. 132 pages. Dimensions: 9.0in. x 6.0in. x 0.3in. 52 Humorous And Inspirational Short Stories! 52 humorous and inspirational short stories from year 7 of...

[Download eBook »](#)



Kindle Fire Tips And Tricks How To Unlock The True Power Inside Your Kindle Fire

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 52 pages. Dimensions: 9.0in. x 6.0in. x 0.1in. Still finding it getting your way around your Kindle Fire? Wish you had...

[Download eBook »](#)



Dont Line Their Pockets With Gold Line Your Own A Small How To Book on Living Large

Madelyn D R Books. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in. This book is about my cousin, Billy, a guy who taught me a lot over the years and who...

[Download eBook »](#)



Too Old for Motor Racing: A Short Story in Case I Didnt Live Long Enough to Finish Writing a Longer One

Balboa Press. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in. We all have dreams of what we want to do and who we want to become. Many of us eventually decide...

[Download eBook »](#)



The Whale Tells His Side of the Story Hey God, Ive Got Some Guy Named Jonah in My Stomach and I Think Im Gonna Throw Up

B&H Kids. Hardcover. Book Condition: New. Cory Jones (illustrator). Hardcover. 32 pages. Dimensions: 9.1in. x 7.2in. x 0.3in. Oh sure, we all heard the story of Jonah and the Whale a hundred times. But have we...

[Download eBook »](#)