Econometric Reviews ›
Volume 31, 2012 - Issue 3

Original Articles

A Survey of Sequential Monte Carlo Methods for Economics and Finance

Drew Creal

Pages 245-296 | Published online: 28 Nov 2011

Cite this article https://doi.org/10.1080/07474938.2011.607333

Abstract

This arti… of sequent… quential Monte C… high-dimensi… hese methods… dynamic stochast… . The objecti… references to th… ethods in practice

Keywords

Kalman filt… e models

JEL Classi…

C11 C15 C32

ACKNOWLEDGMENTS

I would like to thank Charles Bos, Siem Jan Koopman, Michael Massmann, Herman van Dijk, Eric Zivot, participants at the Emerging Methods in Bayesian Econometrics Workshop at Erasmus Universiteit Rotterdam, and two anonymous referees for constructive comments. I would also like to acknowledge financial support from the Grover and Creta Ensley Fellowship, which funded part of this research while I was a graduate student at the University of Washington. All the computations reported in this article were carried out using the OxMetrix 6.0 programming environment of Doornik (2009). Ox and some Matlab code are available upon request from the author.

Notes

[1]The residual and systematic resampling schemes are also known in the genetic algorith

[2]Matlab … de Freitas' webpage

[3]The squ … mptotic variance … ere the function

[4]Kee … $_n(x_n \mid x_{n-1}, y$ …

[5]For exa … nce (42) will remain b

a. For a

b. For a

c. For a

where X and Y are the state spaces of the Markov chain.

[6]In a standard particle filter from Section 2, the joint smoothing densities are analagous to the artificial joint densities described here.