
ATHENS *P*ROBABILITY COLLOQUIUM

Saturday May 9, 2015
Math Dept, University of Athens

**“Sequential Monte Carlo methods:
some Developments and Applications”**

Alexandros Beskos

Abstract: Sequential Monte Carlo (SMC) methods are nowadays routinely applied in a variety of complex applications: hidden Markov models, dynamical systems, target tracking, control problems, just to name a few. SMC algorithms have been greatly refined in the last decades and their theoretical properties are now much better understood. The talk will review recent advancements in SMC algorithms, and present some attempts (where the speaker is involved) for applying such methods in complex models in Data Assimilation and Biostatistics, illustrating the relevant computational challenges. Some recent research involving multi-level approaches for reducing algorithmic costs will also be presented.

***A*PROC 2015**
