



CLIM Program Transition Workshop

May 14-16, 2018

Lecture: *A Fast Particle-Based Approach for Computer Model Calibration*

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Abstract:

Complex computer models play a prominent role in climate science, particularly in projecting future climate. These models have key parameters that need to be inferred ("calibrated") based on observational data. We describe a sequential Monte Carlo method that is well suited for calibration problems for which standard Markov chain Monte Carlo methods and model emulation approaches are computationally burdensome. The motivating scientific problem for our work is a computer model for projecting the future of the Antarctic ice sheet.