



THE UNIVERSITY OF
CHICAGO

Departments of Computer Science, Mathematics, and Statistics
SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR

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Implicit Sampling with Applications

THURSDAY, November 15, 2012, at 3:00 PM

112 Stevanovich Center, 5727 S. University Avenue

ABSTRACT

It is surprisingly difficult to use a computer to sample a given probability density, indeed, in several important fields, this is the major obstacle to effective computing. Implicit sampling is a general sampling technique that helps in many cases. The idea is to use a variational method to find importance functions numerically. I will explain the construction in simple cases, and then show how it is used in data assimilation, i.e., in the estimation of the state of a complex system (for example, the atmosphere) on the basis of an uncertain model supplemented by noisy data.

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