



THE UNIVERSITY OF
CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

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Affine Invariant Ensemble Sampling: Bayesian Parameter
Estimation for a Biological Oscillator

THURSDAY, May 11, 2017, at 3:30 PM
Jones 304, 5747 S. Ellis Avenue

ABSTRACT

MCMC methods allow one to estimate averages against probability densities that are not analytically tractable. We use a method by Goodman and Weare whose performance is invariant with respect to affine transformations to obtain Bayesian estimates for the parameters of two existing models of an important biological oscillator. We find that only one of the models is able to explain the oscillator's robust period with respect to varying input.

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