

Joint Colloquium

UNIVERSITY OF GEORGIA
DEPARTMENT OF STATISTICS
DEPARTMENT OF EPIDEMIOLOGY
AND BIostatISTICS

Greg Rempala
Medical College of Georgia

“Statistical Inference for Markov Jump Processes and Stochastic Epidemic Models”

The theory of Markov jump processes has broad applications in molecular biology and population dynamics modeling. One of the most important practical aspects of analyzing models based on Markov jump processes under the so called “mass-action” kinetics, is the inference on the reaction rate constants. The presentation shall describe some conditions on the data process and the underlying likelihood function which guarantee the identifiability of the process parameters and the consistency of the maximum likelihood estimates. The idea is based on analyzing the exponential tightness of the partial likelihood process, according to some new methods developed recently. Research is partially sponsored by the US National Science Foundation.

This is joined work with Tom Kurtz, University of Wisconsin and Boseung Choi, Medical College of Georgia.

Thursday September 23, 2010

ROOM 306

Statistics Building

University of Georgia

Athens, GA 30602

3:30 P.M. – Room 306, Statistics Building

Refreshments following talk at 4:30 P.M. in room 230 (The Cohen Room)