

# *Joint Colloquium*

UNIVERSITY OF GEORGIA  
DEPARTMENT OF STATISTICS  
DEPARTMENT OF EPIDEMIOLOGY  
AND BIostatISTICS

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## **“Why Bother With Bayes?”**

The use of Bayesian designs and analyses in biomedical and many other applications has burgeoned, even though its use entails additional overhead. Consequently, it is evident that statisticians and collaborators are increasingly finding the approach worth the bother. To help explain this increase in prevalence, I highlight a subset of the potential advantages of the Bayesian formalism and Bayesian philosophy in study design (“Everyone is a Bayesian in the design phase”), conduct, analysis and reporting. Strategic approaches include use of the formalism to develop designs and analyses with required frequentist properties (Bayes for frequentist) and for fully Bayesian goals (Bayes for Bayes). Examples include sample size estimation, use of historical controls, accommodating subgroups, dealing with multiplicity, and addressing complex goals.

The Bayesian approach is by no means a panacea. Valid development and application places additional obligations on the investigative team, and so it isn’t always worth the effort. However, the investment can pay big dividends, the cost/benefit relation is increasingly attractive, and in many situations it is definitely worth the bother.

**Thursday October 7th, 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)**