

Department of Applied and Computational Mathematics and Statistics Colloquium



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Gibbs Posterior Distributions

Bayesian methods provide a standard framework for statistical inference in which prior beliefs about a population under study are combined with evidence provided by data to produce revised posterior beliefs. As with all likelihood-based methods, Bayesian methods may present drawbacks stemming from model misspecification and over-parametrization. A generalization of Bayesian posteriors, called Gibbs posteriors, link the data and population parameters of interest via a loss function rather than a likelihood, thereby avoiding these potential difficulties. At the same time, Gibbs posteriors retain the prior-to-posterior updating of beliefs. We will illustrate the advantages of Gibbs methods in examples and highlight newly developed strategies to analyze the large-sample properties of Gibbs posterior distributions.

Friday, January 10, 2020
4:15PM – 5:15 PM
127 Hayes-Healy Center

Colloquium Tea 3:45 PM to 4:15 PM 101A Crowley Commons Room