

## Department of Statistics STATISTICS COLLOQUIUM

## TETSUYA KAJI

University of Chicago Booth School of Business

An Approximate Metropolis-Hastings Algorithm for Simulation-Based Bayesian Inference (with Veronika Ročková)

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## **ABSTRACT**

We develop a general method to recover the posterior in a generative Bayes model, which requires neither a likelihood nor a sufficient statistic. Our method is a variant of the Metropolis-Hastings algorithm based on a possibly inconsistent estimator of the posterior. We give conditions under which this algorithm yields a reasonable set of posterior draws.