1083-60-214   **Natesh Pillai***, 1 Oxford Street, Cambridge, MA 02138, and **Martin Lysy**. *Statistical Inference for stochastic differential equations driven by Fractional Brownian Motion.*

We present a methodology for doing parameter estimation for stochastic differential equations driven by fractional Brownian motion. Our approach is computational: we present a Gibbs sampling algorithm which will give posterior draws of the parameter conditioned on discretely observed diffusions driven by fractional noise. This approach can easily be extended for other driving noises which are "rough paths". Joint work with Martin Lysy. (Received August 28, 2012)