1135-65-2994   **Eric de Sturler*** (`sturler@vt.edu`), Department of Mathematics, 460 McBryde Hall, Blacksburg, VA 24061-0123, and **Misha E. Kilmer**, **Eric L. Miller** and **Arvind K. Saibaba**.
Efficient Bayesian Inversion in High-Dimensional Inverse Problems. Preliminary report.

We consider randomization and model reduction strategies for Bayesian inversion solving parameterized inverse problems in diffuse optical tomography. We analyze how the trade-off between the accuracy of samples and the number of required samples for convergence influence the total cost of the MCMC process. (Received September 26, 2017)