

1145-VT-2997 **Sharang Chaudhry*** (sharang.chaudhry@unlv.edu), **Daniel Lautzenheiser** and **Kaushik Ghosh**. *Sampling Prudently using Inversion Spheres on the Simplex*.

Building efficient sampling strategies is at the heart of computational Bayesian methods. The problem can get considerably hard when the parameters of interest are constrained. To mitigate the severity of this challenge, it is possible to transform the constrained parameter space to be more conducive to sampling. In this work, a particular transformation called inversion in a sphere has been embedded within the popular Metropolis-Hastings paradigm to effectively sample on a standard simplex (sum-to-one constraint). The method's performance has been assessed using simulation studies and comparative analyses. (Received September 26, 2018)