



The University of Chicago
Department of Statistics

Mini-seminars for First Year Ph.D. Students

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Equi-energy Sampler by Kou, Zhou and Wong

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ABSTRACT

We introduce a new sampling algorithm, the equi-energy sampler, which, complementary to the widely used temperature-domain methods, utilizes the temperature-energy duality and targets the energy directly. The focus on the energy function also provides a powerful means for statistical estimation, for example, the calculation of the density of states and microcanonical averages in statistical mechanics. The equi-energy sampler can be applied to exponential regression in statistics.