
Stochastic Gradient Riemannian Langevin Dynamics on the Probability Simplex —Supplementary Material—

Sam Patterson

Gatsby Computational Neuroscience Unit
University College London
spatterson@gatsby.ucl.ac.uk

Yee Whye Teh

Department of Statistics
University of Oxford
y.w.teh@stats.ox.ac.uk

Algorithm	a	b	c	α	β	K	Gibbs samples / Fixed-pt iterations
OVb	0.1	10000	0.7	0.01	0.01	50	5
HSVG	0.1	1000	0.7	0.01	0.01	50	5
SGRLD	0.05	1000	0.7	0.01	0.01	50	10

Table 1: Parameter settings for NIPS experiment.

Algorithm	a	b	c	α	β	K	Gibbs samples / Fixed-pt iterations
OVb	0.01	10000	0.6	0.01	0.1	100	100
OVb	0.01	1000	0.6	0.01	0.1	100	200
OVb	0.001	10000	0.6	0.01	0.1	100	100
HSVG	0.001	10000	0.8	0.01	0.001	100	200
HSVG	0.001	10000	0.6	0.01	0.1	100	200
HSVG	0.001	10000	0.8	0.01	0.1	100	200
SGRLD	0.001	10000	0.6	0.01	0.0001	100	200
SGRLD	0.001	1000	0.6	0.01	0.0001	100	200
SGRLD	0.001	1000	0.6	0.01	0.1	100	200

Table 2: Parameter settings for Wikipedia experiment.