

A. Hamiltonian Monte Carlo

MCMC using Hamiltonian dynamics

<http://arxiv.org/abs/1206.1901>

The No-U-turn sampler: adaptively setting path lengths in Hamiltonian Monte Carlo

<http://dl.acm.org/citation.cfm?id=2638586&CFID=767851717&CFTOKEN=28450609>

Randomized Hamiltonian Monte Carlo

<http://www.crab.rutgers.edu/~nb361/mypapers/BoSa2015.pdf>

B. Sequential Monte Carlo Samplers

Error Bounds for Sequential Monte Carlo Samplers for Multimodal Distributions

<http://front.math.ucdavis.edu/1509.08775>

Random Walks with absorbing barriers and SMC

<https://arxiv.org/abs/1611.03177>

C. Optimal scaling and diffusion limits for Metropolis algorithms in high dimensions

Optimal scaling for the transient phase of the random walk Metropolis algorithm: The mean-field limit

<http://front.math.ucdavis.edu/1210.7639>

Optimal scaling for the transient phase of Metropolis Hastings algorithms: The longtime behavior

<http://front.math.ucdavis.edu/1212.5517>

D. Non-reversible diffusions and convergence to equilibrium

Variance Reduction using Nonreversible Langevin Samplers

<http://front.math.ucdavis.edu/1506.04934>

Optimal non-reversible linear drift for the convergence to equilibrium of a diffusion

<http://front.math.ucdavis.edu/1212.0876>

Large-time behavior of non-symmetric Fokker-Planck type equations

<http://www.asc.tuwien.ac.at/~arnold/papers/2-1-11%5B156%5D.pdf>

Improving the convergence of reversible samplers

<http://front.math.ucdavis.edu/1601.08118>

E. Mean-field limits

A new approach to quantitative propagation of chaos for drift, diffusion and jump processes

<http://arxiv.org/abs/1101.4727>

Trend to equilibrium and particle approximation for a weakly selfconsistent Vlasov-Fokker-Planck equation

<http://arxiv.org/abs/0906.1417>

Stochastic mean-field limits: Non-Lipschitz forces and swarming (Bolley, Canizo, Carrillo)

F. Further topics

Non-linear diffusions and free energy, entropy methods

Y. Tamura: Free energy and the convergence of distributions of diffusion processes of McKean type, *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 34 (1987), no. 2, 443–484.

Entropy and chaos in the Kac model (Carlen, Carvalho, LeRoux, Loss, Villani)

Optimal Transport and Sequential Monte Carlo

Gibbs Flow for Approximate Transport with Applications to Bayesian Computation

<http://front.math.ucdavis.edu/1509.08787>

An introduction to sampling via measure transport

<http://front.math.ucdavis.edu/1602.05023>

Relative entropy rate and irreversibility

Measuring the Irreversibility of Numerical Schemes for Reversible Stochastic Differential Equations

<http://front.math.ucdavis.edu/1207.5665>

Computation of sensitivities

Computation of sensitivities for the invariant measure of a parameter dependent diffusion

<http://front.math.ucdavis.edu/1509.01348>

Couplings

Coupling and tracking of regime-switching martingales

<https://arxiv.org/abs/1209.0180>

<https://arxiv.org/abs/1304.1999>