

Stochastic calculus and high dimensional convex geometry

1. **Lee & Vempala: Eldan's stochastic localization and the KLS hyperplane conjecture**
<https://arxiv.org/abs/1612.01507> <https://arxiv.org/abs/1807.03465>
2. **Eldan, Mikulincer, Zhai: CLT in high dimensions: quantitative bounds via martingale embedding**
<https://arxiv.org/abs/1806.09087>
3. **Jiang, Lee, Vempala: A generalized central limit conjecture for convex bodies**
<https://arxiv.org/abs/1909.13127>

Couplings of Markov processes

4. **Burdzy & Kendall: Efficient Markovian couplings: Examples and counterexamples**
The Annals of Applied Probability, Vol. 10, No. 2 (May, 2000), pp. 362-409
(Couplings of Markov processes in discrete and continuous time)
5. **Arroyo & Parviainen: Asymptotic Hölder regularity for the ellipsoid processes**
<https://arxiv.org/abs/1905.02037>
(Couplings and regularity, connections to pde)

Mixing and stability in applications

6. **Martinelli & Sinclair: Mixing time for SOS model**
Annals of Applied Probability 2012, Vol. 22, No. 3, 1136–1166
(Coupling, Mixing time bounds for Markov chains, statistical physics)
7. **McDonald & Yüksel: Exponential filter stability via Dobrushin's coefficient**
<https://arxiv.org/abs/1910.08463>
(Hidden Markov models, filtering, stability)

Machine learning

8. **Dunlop, Girolami, Stuart, Teckentrup: How deep are deep Gaussian processes ?**
<https://arxiv.org/abs/1711.11280>
(Gaussian processes and deep learning)
9. **Zhang, Liang, Charikar: A hitting time analysis of stochastic gradient Langevin dynamics**
(Hitting times of Markov chains, isoperimetric constant, statistics, machine learning)
PMLR 65:1980-2022, 2017. <https://arxiv.org/abs/1702.05575>

Markov Chain Monte Carlo

- 10. Hosseini, Johndrow: Spectral gaps and error estimates for infinite dimensional Metropolis-Hastings with non-Gaussian priors**
<https://arxiv.org/abs/1810.00297>
(Metropolis-Hastings, stochastic processes on infinite dimensional spaces)
- 11. Mou, Ho, Wainwright, Bartlett, Jordan: Sampling for Bayesian mixture models: MCMC with polynomial-time mixing**
<https://arxiv.org/abs/1912.05153>
(MCMC, mixing times, conductance)
- 12. Qin & Hobert: Wasserstein-based methods for convergence complexity analysis of MCMC with application to Albert and Chib's algorithm**
<https://arxiv.org/abs/1810.08826>
(MCMC, coupling, Wasserstein distance, Bayesian statistics in high dimensions)