

# Subgeometric hypocoercivity for piecewise-deterministic Markov process Monte Carlo methods

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29th January 2021, 1pm UK time

## **Abstract**

Hypocoercivity is a useful technique to prove exponential convergence to equilibria for stochastic processes. In this talk I will give an introduction to the theory of hypocoercivity for Piecewise Deterministic Markov Processes and discuss how we can extend the hypocoercivity theory to prove convergence for PDMP with heavy-tailed target distributions, which exhibit subgeometric rates of convergence to equilibrium

This is based on joint work with C. Andrieu and A. Wang.

## **References**

- [1] Andrieu, Christophe, Paul Dobson, and Andi Q. Wang. "Subgeometric hypocoercivity for piecewise-deterministic Markov process Monte Carlo methods." arXiv preprint arXiv:2011.09341 (2020).