Some Functional Inequalities for SDEs Driven by Fractional Brownian Motions

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Abstract: Concentration property and Log-Sobolev inequalities for stochastic differential equations (SDE) are usually discussed under a Markovian setting for the underlying semi-group of the system. In this talk, we present some results on this direction for some SDEs driven by fractional Brownian motions. In particular, based on our concentration property, we derive a global Gaussian upper bound for the density function of solution to such SDEs.

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