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Harnack inequalities and applications for functional SDEs driven by fractional Brownian motion. (English) [Zbl 1327.60120](#)

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Summary: In this paper, Harnack inequalities are established for stochastic functional differential equations driven by fractional Brownian motion with Hurst parameter $H < 1/2$. As applications, the strong Feller property, the log-Harnack inequality and the entropy-cost inequality are given. We also get the derivative estimate and give the corresponding Harnack inequality.

MSC:

60H10 Stochastic ordinary differential equations (aspects of stochastic analysis)

60H20 Stochastic integral equations

60G22 Fractional processes, including fractional Brownian motion

34K50 Stochastic functional-differential equations

Keywords:

functional stochastic differential equations; Harnack inequalities; fractional Brownian motion; strong Feller property

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