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Kolmogorov equation and large-time behaviour for fractional Brownian motion driven linear SDE's. (English) [Zbl 1099.60040](#)

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Summary: We consider a stochastic process X_t^x which solves an equation

$$dX_t^x = AX_t^x dt + \Phi dB_t^H, \quad X_0^x = x,$$

where A and Φ are real matrices and B^H is a fractional Brownian motion with Hurst parameter $H \in (1/2, 1)$. The Kolmogorov backward equation for the function $u(t, x) = \mathbb{E}f(X_t^x)$ is derived and exponential convergence of probability distributions of solutions to the limit measure is established.

MSC:

[60H05](#) Stochastic integrals

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

Keywords:

[Kolmogorov backwards equation](#); [linear stochastic equation](#)

Full Text: [DOI](#) [EuDML](#) [Link](#)

References:

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