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On explosion time in stochastic differential equations driven by fractional Brownian motion.

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Abstract

In this article, we study the explosion time of the solution to autonomous stochastic differential equations driven by the fractional Brownian motion with Hurst parameter $H > 1/2$. With the help of the Lamperti transformation, we are able to tackle the case of non-constant diffusion coefficients not covered in the literature. In addition, we provide an adaptive Euler-type numerical scheme for approximating the explosion time.

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