Mathematics > Probability

Fractional smoothness and applications in finance

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(Submitted on 20 Apr 2010)

This overview article concerns the notion of fractional smoothness of random variables of the form $g(X_T)$, where $X=(X_t)_{t\in [0,T]}$ is a certain diffusion process. We review the connection to the real interpolation theory, give examples and applications of this concept. The applications in stochastic finance mainly concern the analysis of discrete time hedging errors. We close the review by indicating some further developments.

Comments: Chapter of AMAMEF book. 20 pages.
Subjects: **Probability (math.PR)**; Risk Management (q-fin.RM)
Cite as: **arXiv:1004.3577v1 [math.PR]**

Submission history

From: Emmanuel Gobet [view email]
[v1] Tue, 20 Apr 2010 21:10:02 GMT (35kb)

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