Stochastic of Finance Lecture 4

Contents

1 Recap

2 Content

2.1 Sample path properties of Brownian Motion

Definition 1

Holder continuous

$f : [0, T] \to \mathbb{R}$ is uniformly Holder continuous with exponent $0 < \gamma \leq 1$ if $|f(s) - f(t)| \leq k|s - t|^{\gamma}$ for all $s, t \in [0, T]$.

Definition 2

Holder continuous at some point.

f is Holder continuous at point $s_0 \in [0, T]$ if $\exists k$ such that $|f(t) - f(s_0)| \leq k|t - s_0|^{\gamma}$ for all $t \in [0, T]$.