

## Conventions and frequently used notations

Unless specified otherwise, the Borel measures we consider on  $\mathbb{R}^n$  are assumed to be Radon measures, that is, are finite on compact sets.

$\mathbb{R}_{\geq 0}$	$[0, +\infty)$
$\mathbb{R}^{n \times p}$	set of $n \times p$ matrices
${}^c A$ or $A^c$	complement of the set $A$
$[x]$	integer part of $x$
$x \wedge y$	minimum between $x$ and $y$
$\Gamma(x)$	$\Gamma(x) = \int_0^{+\infty} t^{x-1} e^{-t} dt$
$\mathcal{A}(A, B)$	set of functions $A \rightarrow B$
$\mathcal{C}(A, B)$	set of continuous functions $A \rightarrow B$
$\mathcal{C}^k(A, B)$	functions $A \rightarrow B$ , $k$ -times continuously differentiable
$\mathcal{C}_c(A, B)$	functions $A \rightarrow B$ , smooth and compactly supported inside $A$
$\mathcal{C}_0(A, B)$	continuous functions $A \rightarrow B$ whose limit at $\infty$ is 0
$\mathcal{C}^{k,l}(A \times B, C)$	functions $A \times B \rightarrow C$ which are $k$ -times continuously differentiable in the first variable and $l$ times in the second
$\mathcal{T}(A, B)$	$\sigma$ -field on $\mathcal{A}(A, B)$ generated by cylinders
$\mathcal{B}(A, B)$	$\sigma$ -field on $\mathcal{C}(A, B)$ generated by cylinders
$\mathcal{B}(A)$	Borel $\sigma$ -field on $A$
$L^p_\mu(A, B)$	$L^p$ space of functions $A \rightarrow B$ for the measure $\mu$
$L^p(\mathcal{F}, \mathbb{P})$	real $L^p$ space of $\mathcal{F}$ measurable random variables
$\Delta_n[0, t]$	$\{0 = t_0^n \leq t_1^n \leq \dots \leq t_n^n = t\}$
$\int H_s dM_s$	Itô integral
$\int H_s \circ dM_s$	Stratonovitch integral
$\mathcal{H}_s(\mathbb{R}^n)$	Sobolev space of order $s$
$\mathcal{H}_s^0(\Omega)$	closure of $\mathcal{C}_c(\Omega, \mathbb{C})$ in $\mathcal{H}_s(\mathbb{R}^n)$
<b>D</b>	Malliavin derivative
$\delta$	divergence operator
$\mathbb{D}^{k,p}$	domain of <b>D</b> <sup><math>k</math></sup> in $L^p(\mathcal{F}, \mathbb{P})$
$\ \cdot\ _{p\text{-var}, [s,t]}$	$p$ -variation norm on $[s, t]$
$\ \cdot\ _{\infty, [s,t]}$	supremum norm on $[s, t]$
$C^{p\text{-var}}([s, t], \mathbb{R}^d)$	continuous paths $[s, t] \rightarrow \mathbb{R}^d$ with bounded $p$ -variation
$\int_{\Delta^k [s,t]} dx^I$	$\int_{s \leq t_1 \leq t_2 \leq \dots \leq t_k \leq t} dx^{i_1}(t_1) \dots dx^{i_k}(t_k)$
$\Omega^p([0, T], \mathbb{R}^d)$	space of $p$ -rough paths