

Notation

$ v' (t)$	Metric derivative of $v : (a, b) \rightarrow \mathcal{S}$, see Theorem 1.1.2
$AC^p(a, b; \mathcal{S})$	Absolutely continuous $v : (a, b) \rightarrow \mathcal{S}$ with $ v' \in L^p(a, b)$
$B_r(x)$	Open ball of radius r centered at x in a metric space
$D(\phi)$	Domain of the functional ϕ , see (1.2.1)
$ \partial\phi (v), \mathfrak{l}_\phi(v)$	Local and global slopes of ϕ , see Definition 1.2.4
$\text{Lip}(\phi, A)$	Lipschitz constant of the function ϕ in the set A
$\partial\phi(v)$	Fréchet subdifferential of ϕ in Banach (1.4.7), Hilbert (10.0.1), or Wasserstein spaces, see Definition 10.1.1 and (10.3.12)
$\partial^\circ\phi(\mu)$	Minimal selection map in the subdifferential, see Section 1.4 and (10.1.14)
$ \partial^-\phi (v)$	Relaxed slope of ϕ , see (2.3.1)
$\Phi(\tau, u; v)$	Quadratic perturbation of ϕ by $d^2(u, \cdot)/2\tau$, see (2.0.3b)
$J_\tau[u]$	Resolvent operator, see (2.0.5)
$\bar{U}_\tau(t)$	Piecewise constant interpolation of U_τ^n , see (2.0.7)
$MM(\Phi; u_0)$	Minimizing movement of ϕ , see Definition 2.0.6
$GMM(\Phi; u_0)$	Generalized minimizing movement of ϕ , see Definition 2.0.6
$\phi_\tau(u)$	Moreau–Yosida approximation of ϕ , see Definition 3.1.1
$\bar{U}_\tau(t)$	De Giorgi’s interpolation of U_τ^n , see (3.2.1)
$\mathcal{B}(X)$	Borel sets in a separable metric space X
$C_b^0(X)$	Space of continuous and bounded real functions defined on X
$C_c^\infty(\mathbb{R}^d)$	Space of smooth real functions with compact support in \mathbb{R}^d
$\mathcal{P}(X)$	Probability measures in a separable metric space X
$\mathcal{P}_p(X)$	Probability measures with finite p -th moment, see (5.1.22)
$\mathcal{P}_{pq}(X \times X)$	Probability measures with finite p, q -th moments, see (10.3.2)
$L^p(\mu; X)$	L^p space of μ -measurable X -valued maps, see (5.4.3)
X_ϖ	The Hilbert space X endowed with a weaker (normed) topology, see Section 5.1.2
$\tilde{f}, \tilde{\nabla}f$	Approximate limit and differential of a function f , see Definition 5.5.1
$\text{supp } \mu$	Support of μ , see (5.0.1)
$\text{span } C$	Linear envelope generated by a subset C of a vector space
$\mathbf{r}\#\mu$	Push-forward of μ through \mathbf{r} , see (5.2.1)
$\pi^i, \pi^{i,j}$	Projection operators on a product space \mathbf{X} , see (5.2.9)
$\Gamma(\mu^1, \mu^2)$	2-plans with given marginals μ^1, μ^2
$\Gamma_o(\mu^1, \mu^2)$	Optimal 2-plans with given marginals μ^1, μ^2
\mathbf{i}	Identity map
\mathbf{t}_μ^ν	Optimal transport map between μ and ν , see (7.1.4)
$\bar{W}_p(\mu, \nu)$	p -th Wasserstein distance between μ and ν
$\bar{W}_\mu(\mu, \nu)$	Pseudo-Wasserstein distance induced by μ , see (7.3.2)
$\bar{W}_{p,\mu}(\mu, \nu)$	Pseudo p -th-Wasserstein distance induced μ , see (10.2.9)
$\pi_t^{i \rightarrow j}, \pi_t^{i \rightarrow j,k}$	Interpolated projections, see (7.2.2)
j_p	Duality map between L^p and $L^{p'}$, see (8.3.1)

$\Pi_d(X)$	d -dimensional projections on a Hilbert space X , see Definition 5.1.11
$\text{Cyl}(X)$	Cylindrical test functions on a Hilbert space X , see Definition 5.1.11
$\bar{\gamma}(x)$	Barycentric projection of a plan γ in $\mathcal{P}(X \times X)$, see (5.4.9)
$\text{Tan}_{\mu} \mathcal{P}_p(X)$	Tangent bundle to $\mathcal{P}_p(X)$, see Definition 8.4.1
$\Gamma_o(\boldsymbol{\mu}^{1,2}, \mu^3)$	3-plans γ such that $\pi_{\#}^{1,3} \gamma \in \Gamma_o(\pi_{\#}^1 \boldsymbol{\mu}^{1,2}, \mu^3)$
$\partial\phi(\mu)$	Extended Fréchet subdifferential of ϕ at μ , see Definitions 10.3.1
$\partial^\circ\phi(\mu)$	Minimal selection plan in the subdifferential, see Theorem 10.3.11