

Errata for “An Invitation to Statistics in Wasserstein Spaces”

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Errata in the book:

1. p.18, Proposition 1.6.5: π is any transport plan
(it does not have to come from a map, and the optimal plan does not need to be unique)
2. p.49: the first equality should read

$$W_2^2(\mu, \nu) = \|F_\mu^{-1} - F_\nu^{-1}\|_{L^2(0,1)}^2$$

(there was a square missing)

3. p.64: the equality near the bottom of the page should read

$$F_\mu^{-1} = \frac{1}{N} \sum_{i=1}^N F_{\mu^i}^{-1}$$

(there was an inverse missing)

4. p.65: the last equality should read

$$\int_{\mathcal{X}} \|\mathbf{t}_{\mu^i}^{\mu^i} \circ \mathbf{t}_{\mu^j}^{\mu^1} - \mathbf{i}\| d\mu^j = W_2^2(\mu^i, \mu^j)$$

(there was an incorrect $\mathbf{t}_{\mu^j}^{\mu^i}$ term)

Errata in the supplement:

1. p.14: the line after “and as before” should read

$$\sup_n \|\langle \mathbf{t}_{\theta_0}^{\Lambda_n}, \mathbf{t}_{\theta_0}^\theta - \mathbf{i} \rangle\|_{L_2(\theta_0)} \leq W_2(\theta_0, \theta) \sup_n \|\|\mathbf{t}_{\theta_0}^{\Lambda_n}\|_{\mathcal{X}}\|_{L_2(\theta_0)} \leq 2W_2(\theta_0, \theta) \|\|\mathbf{t}_{\theta_0}^\Lambda\|_{\mathcal{L}_2(\theta_0)}\|$$

(some norms were erroneously in $L_2(\theta)$ instead of $L_2(\theta_0)$)