

**LIST OF ERRATA TO “MULTIPARAMETER PROCESSES,”
BY DAVAR KHOSHNEVISAN,
PUBLISHED BY SPRINGER, NEW YORK (2002)**

D. KHOSHNEVISAN
LAST UPDATE: APRIL 15, 2010

1. CHAPTER 1

- p. 19, Exercise 2.2.2:** Should have $\gamma : \mathbf{N}_0 \rightarrow \mathbf{N}_0^N$ such that whenever $s \leq t$ then $\gamma(s) < \gamma(t)$. (My thanks to Ngo Hoang Long for finding this.)
- p. 20, Theorem 2.4.1:** As stated, $\ln_+(x) = \ln(x \vee 1)$, and Ψ^p is not convex on \mathbf{R}_+ for $p \in (0, 1)$. However, Ψ^p is convex if $\ln_+(x) := \ln(x \vee e)$. (My thanks to Ngo Hoang Long for finding this.) The same \ln_+ convention should be applied here and throughout.
- p. 27, Lemma 2.8.1:** Ψ should also be assumed to be non-decreasing on $[0, \infty)$. (My thanks to Ngo Hoang Long for finding this.)

2. CHAPTER 3

- p. 64:** Santayana is misspelled. Also the correct quotation from George Santayana is “Those who cannot remember the past are condemned to repeat it” (The Life of Reason, Vol. 1, 1905).

3. CHAPTER 4

- p. 105, l. –6:** The LIL holds **if** $\mathbb{E}[|\xi|^2 \{\ln_+ |\xi|\}^{N-1}] < \infty$. The necessary and sufficient condition is implicit in a paper by Michael J. Wichura [*Ann. Probab.* **1**, 272–296, 1973]: When $N > 1$,

$$\text{LIL holds} \quad \text{iff} \quad \mathbb{E} \left[|\xi|^2 \frac{\log_+^{N-1} |\xi|}{\log \log |\xi|} \right] < \infty.$$

The proof is not much harder, but requires an adaptation of the entire truncation method of Feller.

4. CHAPTER 8

p. 278: The resolvent equation should state

$$\mathcal{R}_\gamma - \mathcal{R}_\lambda = (\lambda - \gamma)\mathcal{R}_\gamma\mathcal{R}_\lambda.$$

(My thanks to S.-Y. Shiu for finding this.)

p. 283: The definition of a Markov semigroup should state that $\mathcal{T}_t \mathbf{1} := \mathbf{1}$, where $\mathbf{1}(x) := 1$ for all x .

5. CHAPTER 9

p. 336, (1): The limits of integration in (1) should be from -1 to 1 .

6. CHAPTER 12

p. 469: Just above Lemma 1.4.2 it should say “See Theorem 2.4.1 of Chapter 7,” and not “cf. Theorem 2.3.2 of Chapter 7.”

p. 488: The estimate of Proposition 3.4.1 should read

$$\mathbb{E} \left[\left\{ \int_A f(B_s) ds \right\}^m \right] \leq \Gamma^m \|f\|_1^m (m!)^N h^{m(2N-d)/2}.$$

The proof is OK.

7. APPENDIX C

p. 524, Exercise 2.3.3: μ should also be assumed to be atomless.

p. 524, l. -11: $\mu\{\mathcal{B}(x; r)\}$ should replace $\mu\{\mathcal{B}(x; r)b\}$ (extra “ b ”).

8. APPENDIX D

p. 536, Theorem 2.1.2: This is OK, but it would be much better if it emphasized that we are assuming the existence of the maximum principle.

p. 537, l. 9: “ $\mathcal{E}_g(E) < +\infty$ ” should be replaced with “ $\mathcal{E}_g(\sigma_0) < \infty$.”