

A BASIC COURSE IN PROBABILITY THEORY, 2nd Edition: ERRATA

The red describes the change and location, while the black typeset is the correct content.

TECHNICAL CORRECTIONS

1. p.31, Remark 2.1: Replace Chapter IV by Chapter VIII Chapter VIII
2. p. 97, 7 & 8 lines down: Replace τ by h^* as indicated $Q_-(dy) = \varphi(h^*)^{-1}e^{h^*y}Q_-(dy)$
3. p. 97, 9 lines down: Replace h^* by h as indicated $\psi(h) = \mathbb{E}e^{h\tilde{Y}_j} =$
4. p. 97, 12 lines down: Replace '=' by \geq $\int_{\{(y_1, \dots, y_n): \sum_{j=1}^n y_j \geq 0\}}$
5. p. 97, 13 lines down: Replace '=' by \geq $\int_{\{(y_1, \dots, y_n): \sum_{j=1}^n y_j \geq 0\}}$
6. p. 97, 14 lines down: Raise $\sigma\sqrt{nx}$ to be part of exponent $\int_{[0, \infty)} e^{-h^* \sigma\sqrt{nx}} F_n(dx)$
7. p. 97, 3 lines up: Replace τ by h^* $|R_n| = \varphi^n(h^*)\epsilon_n$
8. p. 97, last line: Replace X_1 by \tilde{Y}_1 $\frac{\mathbb{E}|\tilde{Y}_1|^3}{\sigma^3\sqrt{n}}$
9. p.98, 8 lines up: Replace e^{aY} by e^{ha} on right side of inequality $e^{hY} \leq \frac{b-Y}{b-a}e^{ha} + \frac{Y-a}{b-a}e^{hb}$
10. p. 127, 6 lines up: Replace $= m$ by $\leq m$ $|\Phi'(x)| \leq m < 2/5$
11. p. 127, display (6.62): Replace σn by $\sigma\sqrt{n}$ in argument for φ^n $\varphi^n(\frac{\xi}{\sigma\sqrt{n}})$
12. p. 128, last line of (6.64): Replace 1 by ρ as indicated $\frac{\rho}{6\sigma^3 n^{\frac{3}{2}}}$
13. p. 128, last display in the proof of Theorem 6.17: Replace $\frac{98}{99}$ by 9.6 and divide expression in brackets by T on right side of inequality $\leq [\frac{8}{9}\sqrt{\pi} + 9.6]/T$.
14. p.128, last line in the proof of Theorem 6.17:
Replace 4π by the indicated bound ... smaller than $3\pi\rho/(\sigma^3\sqrt{n})$.
15. p. 134, Exercise 25(i): Insert superscript n for φ^n in displayed equation. $\int_{[-\pi, \pi)^k} \varphi^n(\xi) d\xi$
16. p. 136, 6 lines down: Delete 'given by' and insert for $Z_k = S_k - S_{k-1}$, ... $k = 0, 1, \dots, n$, for $Z_k = S_k - S_{k-1}$,
17. p. 136, 8 lines down: Replace Y_{k+1} by Z_{k+1} in displayed equation and insert period at end of display. $\sqrt{n}Z_{k+1}(t - \frac{k}{n}) + \dots$
18. p.149, 10 lines down: Replace $|\mathbb{E}$ by $<$ $Q_n(\{\omega \in C[0, 1] : |\omega_0| > B\}) < \eta$, $n = 1, 2, \dots$
19. p.149, 12 lines down: Replace $|\mathbb{E}\epsilon$ by $\geq \epsilon$ and replace $|\mathbb{E}\eta$ by $< \eta$ $Q_n(\{\omega \in C[0, 1] : \nu_\omega(\delta) \geq \epsilon\}) < \eta$, $n \geq 1$
20. p. 151, 2 lines down: Replace 'p' by 'M' in exponent of 2 belong to $\{0, 1, 2, \dots, 2^{M+1}\}$.

21. p.151, 2 lines down: Replace L_n by L_M $u^*, v^* \in L_M$
22. p. 151, 2 lines down: Replace $-n - 1$ by $-M - 1$ in the exponent $|u - u^*| \leq 2^{-M-1}$
23. p. 155, 6 lines down: Replace \Rightarrow by comma. Suppose that $d_{BL}(Q_m, Q) \rightarrow 0$
24. p. 172, 21 lines down: Delete 'is product space' following 'the product space' ... i.e., the product space, $X_t(\omega) = x_t$
25. p. 172, footnote: This refers to Book II of the Studies in Stochastic Processes, Springer Graduate Text in Mathematics Series, which is to appear. See e.g., Bhattacharya, R.N. and E.C. Waymire, Book II, (to appear).
26. p.238, line before Lemma 1: Replace 'Alexandrov's theorem 7.1' by 'Proposition 1.6' Proposition 1.6
27. p. 242, Theorem 1.3, 3rd line: Replace S by $C(S)$ then \mathcal{H} is dense in $C(S)$, i.e., $\overline{\mathcal{H}} = C(S)$.



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