

Book Title: *A Probability Path*

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(Updated on 08/25/2010)

1. page 13, line 5, " $\bigcup_{i=1}^n A_i^c$ implies" should be " $\bigcup_{i=1}^n A_i^c \in \mathcal{A}$ implies".
2. Page 21, line 2, " $n \in \mathbb{N}$ " should be " $n \geq 1$ " since the denominator should not be 0.
3. Page 22, line -8, "or not a field" is better to be "or not a σ -field".
4. Page 25, line -1, "Find $\mathcal{B}(\mathcal{C})$ " is better to be "Find $\sigma(\mathcal{C})$ ".
5. Page 30, line 10, " $PA + PB$ " should be " $P(A) + P(B)$ ".
6. Page 32, line 6, " $PA_n \downarrow PA$ " is better to be " $P(A_n) \downarrow P(A)$ ".
7. Page 63, line -5, " $P(A\Delta B)$ " should be " $P(A_c\Delta B)$ ".
8. Page 67, line -5, "If $\mathcal{A}_n \in \mathcal{A}$ and $\mathcal{A}_n \downarrow \emptyset$ " should be "If $A_n \in \mathcal{A}$ and $A_n \downarrow \emptyset$ ".
9. Page 69, line 14, " $\theta_1 \wedge \theta_2 \leq x, \theta_1 \wedge \theta_2 \leq y$ " is better to be " $\theta_1 \wedge \theta_2 \geq x, \theta_1 \wedge \theta_2 \leq y$ ".
10. Page 100, line 4, " $+\frac{1}{2^n}$ " should be " $-\frac{1}{2^n}$ ".
11. Page 103, line 13, " $P(\limsup_{n \rightarrow \infty} [X_n = 1]^c)$ " is better to be " $P((\limsup_{n \rightarrow \infty} [X_n = 1])^c)$ ".
12. Page 116, line -13, "Show $\limsup_{n \rightarrow \infty} B_n \neq \emptyset$ " should be "Show $P[\limsup_{n \rightarrow \infty} B_n] > 0$ ".
13. Page 116, line -12, "sequence of independent Bernoulli" should be "sequence of iid Bernoulli".
14. Page 122, line -9, " $\lim_{n \rightarrow \infty} E(Y_m)$ " should be " $\lim_{m \rightarrow \infty} E(Y_m)$ ".
15. Page 131, line -8, "variable for $n \geq 1$ " should be "variable for $j \geq 1$ ".
16. Page 144, line -12, the first " $\lim_{n \rightarrow \infty} (X_n)_{\omega_1}$ " should be " $(\lim_{n \rightarrow \infty} X_n)_{\omega_1}$ ".
17. Page 161, line 8, " $\frac{d}{dx} P(s)$ " should be " $\frac{d}{ds} P(s)$ ".
18. Page 166, line 1, one "}" right to " $\{N(A, \omega), A \in \mathcal{B}(R^2)\}$ " is missing.
19. Page 170, line -10, " $\lim_{n \rightarrow \infty} P[|X_n - X| > \varepsilon]$ " is better to be " $\limsup_{n \rightarrow \infty} P[|X_n - X| > \varepsilon]$ " since we don't know if the limit exists yet.
20. Page 181, line -2, "from Chebychev's inequality" should be "from Markov's inequality".
21. Page 196, line 2, " $\xrightarrow{P} \sigma^2$ " should be " $\xrightarrow{P} \sigma$ ".
22. Page 209, line -13, " $c = \bigvee_{j \leq N} P[|S_j| > \alpha]$ " should be " $c = \bigvee_{j \leq N-1} P[|S_j| > \alpha]$ ".
23. Page 209, line -9, "as (S_1, \dots, S_N) " should be "as (S_1, \dots, S_{N-1}) ".
24. Page 217, line -8, "if $\sum_n \lambda_n^{-1} < 0$ " should be "if $\sum_n \lambda_n^{-1} < \infty$ ".

25. Page 221, line -2, “by Kronecker’s lemma” is better to be “by Corollary 7.4.1”.
26. Page 224-225, there are five “ x_{ν_k} ” which should be “ $x_{\nu,k}$ ”, and one “ x_{1k} ” should be “ $x_{1,k}$ ”.
27. Page 236, line -11, “ $\frac{1}{n} \sum_{i=1}^n c_j X_j$ ” should be “ $\frac{1}{n} \sum_{j=1}^n c_j X_j$ ”.
28. Page 261, line 9, “ $Eh(x)$ ” should be “ $Eh(X_0)$ ”.
29. Page 261, line 11, “ $X_n^2 \rightarrow X_0^2$ ” should be “ $X_n^2 \Longrightarrow X_0^2$ ”.
30. Page 279, line 1, “ $\exp\{-(x)^\alpha\}$ ” should be “ $\exp\{-|x|^\alpha\}$ ” or “ $\exp\{-(-x)^\alpha\}$ ”.
31. Page 284, line -8, “Let F be a non-degenerate df” should be “Let F be a non-degenerate proper df”.
32. Page 286, line -12, “ $G_t(\alpha(t)x + \alpha(t))$ ” should be “ $G_t(\alpha(t)x + \beta(t))$ ”.
33. Page 303, line 10, “ $\int_{-\infty}^{x-z} n(0, \sigma^{-2}, z) dz$ ” should be “ $\int_{-\infty}^{x-z} n(0, \sigma^{-2}, s) ds$ ”.
34. Page 320, line 5, “We know from Chapter 8 that” is better to be “We know from Proposition 7.4.1 that”.
35. Page 322, line -1, “ $Y_n = X_n 1_{[|X_n| \leq \sqrt{n}]}$ ” should be “ $Y_n = X_n 1_{[|X_n| \leq \sqrt{n \log n}]}$ ”.
36. Page 372, line -5, “ $Y_0 = 11_{[0 < \nu_1]}$ ” is better to be “ $Y_0 = 1 \cdot 1_{[0 < \nu_1]}$ ”.
37. Page 375, line -12, “ $\{EX|\mathcal{B}_n, \mathcal{B}_n, n \in \mathbb{N}\}$ ” should be “ $\{E(X|\mathcal{B}_n), \mathcal{B}_n, n \in \mathbb{N}\}$ ”.
38. Page 400, line -8, “ $= (X^2 + o(1))$ ” should be “ $= (Z^2 + o(1))$ ”.
39. Page 423, line -8, “(ii’) $\sum_{\omega \in \Omega} V_N(\phi)(\omega) = 0$ ” should be “(ii’) $\sum_{\omega \in \Omega} \lambda(\omega) V_N(\phi)(\omega) = 0$ ”.
40. Page 433, Exercise 22, need to assume “ $X_0 \in L_1$ ”.
41. Page 434, line 12, “ $\{(X_n = kL_n(Y_n), \sigma(Y_0, \dots, Y_n), n \geq 0)\}$
should be “ $\{(X_n = kL_n(Y_n), \sigma(Y_0, \dots, Y_n), n \geq 1)\}$ ” because $L_0(Y_0)$ is not defined.
42. Page 434, Exercise 27, need to assume “ $\xi \in \mathcal{B}_\infty$ ”.
43. Page 436, Exercise 35, need to assume “ $\xi_n \in L_1$ ”.
44. Page 436, Exercise 36, line 2, “ $n \in \mathbb{N}$ ” should be “ $n \in \bar{\mathbb{N}}$ ” because $\nu = \infty$ is possible.
45. Page 440, line 2, “ $\{Y_n, n \geq 1\}$ ” should be “ $\{Y_n, n \geq 0\}$ ”.
46. Page 441, Exercise 56, line 7, “ $\Pi(V_N(\phi)) = \Pi(V_0(\phi))$ ” should be “ $\Pi(V_N(\phi)) = \Pi(V_0(\phi) S_N^{(0)})$ ”.
47. Page 441, Exercise 56, part (ii), need to assume “ $\Pi(S_N^{(0)}) = 1$ ”.