

Corrections to *Theory of Statistics* (Second Printing)

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If you find errors in the book not listed here or if you wish to offer comments on the book, send them to mark “at” stat.cmu.edu.

Chapter 1

Section 1.1

- p. 2: A footnote is needed to clarify some notation. (9/23/97)
There is a gif version of revised p. 2 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advvt/pages/p2.ps>.)
- p. 3: line -2: “ $2\Phi(-c)$ ” should read “ $1 - 2\Phi(-c)$ ” (6/5/03)

Section 1.3

- p. 13 in footnote 10: “ (S, \mathcal{A}) ” should be “ (S, \mathcal{A}_X) ”
- p. 15 line 14: “ $t_{a_0}(\mu_0, \sqrt{(1/n + 1/\lambda_0)b_0/a_0})$ ” should be “ $t_{a_0}(\mu_0, [1/n + 1/\lambda_0]b_0/a_0)$ ”
- p. 17 first line of Example 1.34: “ X has $Bin(n, \theta)$ ” should be “ X has $Bin(n, \theta)$ distribution”
- p. 18 line -12: “ $t_{a_1}(\mu_1, \sqrt{[1/m + 1/\lambda_1]b_1/a_1})$ ” should be “ $t_{a_1}(\mu_1, [1/m + 1/\lambda_1]b_1/a_1)$ ”
- p. 19 line 8: “ $\int Z(x)dP_\theta(x)$ ” should be “ $\int f(x)dP_\theta(x)$ ” (2/1/00)

Section 1.5

- p. 39, proof of Lemma 1.67: all of the $\binom{N}{n}$ symbols should be permutations instead, namely $N!/(N - n)!$. (5/21/15)
- p. 52 line 7: “ $t_{a_1}(\mu_1, \sqrt{[1/m + 1/\lambda_1]b_1/a_1})$ densities converge to the $t_{a_1}(\mu_1, \sqrt{b_1/[a_1\lambda_1]})$ ” should be “ $t_{a_1}(\mu_1, [1/m + 1/\lambda_1]b_1/a_1)$ densities converge to the $t_{a_1}(\mu_1, b_1/[a_1\lambda_1])$ ”

Section 1.6

- p. 52 line -8: “ $y_{n-1}^{\alpha_n-1}$ ” should be “ $y_{n-1}^{\alpha_n-1-1}$ ” (7/14/99)
- p. 53 middle expression in (1.92): “ Y_1, \dots, Y_n ” should be “ (Y_1, \dots, Y_n) ”
- p. 54, last line of main text: switch “ B_i^1 ” and “ B_i^0 ” (11/17/99)
- p. 55 lines 7 and 18: “ $\frac{\beta_i}{\alpha(\mathcal{X})}$ ” should be “ $\frac{\beta_j}{\alpha(\mathcal{X})}$ ” in both places (11/17/99)

- p. 55 line 13: “ $x \in B_j^1$ ” should be “ $x \in B_j^0$ ” (11/17/99)
- p. 56 line -17: “ I_{B_ϵ} ” should be “ I_{B_ϵ} ” (5/1/01)
- p. 56 lin -17: the subscript “ B_ϵ ” should be “ B_ϵ ” (5/1/01)
- p. 56 line -14: “ $a_n = \alpha(\mathcal{X})/[\alpha(\mathcal{X})+n-1]$ ” should be “ $a_n \leq \alpha(\mathcal{X})/[\alpha(\mathcal{X})+n-1]$ ”
- p. 70 line -5: “ $(c_n + 1)$ ” should be “ $(kc_n + 1)$ ”

Section 1.7

- p. 73 problem 3: n is used both as a dummy and as a fixed value. In the first line, “ X_{n+i} ” should be “ X_{m+i} ” and in the second line, “ X_1, \dots, X_n ” should be “ X_1, \dots, X_m ”. (1/7/99)
- p. 74 problem 11: after the displayed formula, “ $x = \sum_{j=1}^m x_j$ ” should be “ $x = \sum_{j=1}^m x_j$ ”. (2/19/01)
- p. 74 line -2: “how many observations” should be “how many Y_i observations”
- p. 78 problem 34(c): “(refp202)” should be “(b)” (8/25/97)
- p. 80 problem 43: “ α is a finite measure” should read “ α is a finite measure with no point masses” (4/24/00)

Chapter 2

Section 2.1

- p. 84 last line of footnote: “predictive” is misspelled (2/21/00)
- p. 85 second line of Definition 2.8: “ $\Theta : \mathcal{P}_0 \rightarrow \Omega$ ” should be “let Θ ” (2/9/99)
- p. 90 line 11: “ $I_{[t,\infty)}(\theta)/\theta^n$.” should be “ $cI_{[t,\infty)}(\theta)/\theta^n$, where $c = 1/\int_t^\infty \psi^{-n} d\mu_\Theta(\psi)$.” (2/14/00)
- p. 91 line 5: “ $\sum_{i=1}^\infty c_i m_2(t, \theta_i)$ ” should be “ $(\sum_{i=1}^\infty c_i m_2(t, \theta_i))^{-1}$ ” (2/23/99)
- p. 95 line -9: “density” should be “distribution” (2/18/99)

Section 2.2

- p. 104: The last paragraph contains some incorrect statements. (2/15/01)
There is a gif version of revised p. 104 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advt/pages/p104.ps>.)

- p. 108 line -7: “The two sides of (2.75) are” should be “The two sides of (2.75) are r times”

Section 2.3

- p.114 lines 9–11: “ $\frac{\partial}{\partial\theta_i} \log f_{X|Y,\Theta}(X|Y, \theta)$ ” should be “ $\frac{\partial}{\partial\theta_j} \log f_{X|Y,\Theta}(X|Y, \theta)$ ” on all three lines.
- p. 118 line 17: “= $-E_{\theta_0}$ ” should be “= E_{θ_0} ”
- p. 119 line -7: “Example 2.52; see page 100” should be “Example 2.46; see page 97”
- p. 120 line 8: “ $E(M_0) = 1/3$ and $E(N_0) = 1/2$ ” should be “ $E(M_0) = N/3$ and $E(N_0) = N/2$ ”

Section 2.5

- p. 139 problem 13: in the displayed equation, “ $\theta^\top x$ ” should be “ $\theta^\top x_i$ ” (8/27/97)
- p. 140 problem 16 line 3: “ $2\pi\theta^2$ ” should be “ $\pi\theta^2$ ”
- p. 141 problem 24(b): add the sentence “Let Θ have a nondegenerate prior distribution.” (8/27/97)
- p. 143 problem 43: “ $-E_\theta (\partial^2 \log f_{X|T,\Theta}(X|t, \theta) / \partial\theta_i \partial\theta_j)$ ” should be “ $-E_\theta (\partial^2 \log f_{X|\Theta}(X|\theta) / \partial\theta_i \partial\theta_j | T = t)$ ” (9/3/97)
- p. 143 problem 46(b) line 2: “ $\Pr(\Theta = 1|Y_n)$ ” should be “ $\Pr(\Theta = 1|Y_n = q)$ ” (2/21/00)

Chapter 3

Section 3.1

- p. 146 line -5: “ $(v - a)^2$ ” should be “ $(v - \delta(x))^2$ ”
- p. 147 line 17: “all at least one” should be “at least one”
- p. 147 line 23: “ $X = (X_1, \dots, X_{10})$ ” should be “ $X = \sum_{i=1}^{10} X_i$ ” (3/11/99)
- p. 147 in (3.11): “ $dF_{V|X}$ ” should be “ $d\mu_{V|X}$ ”
- p. 147 line -9: “ $dF_{V|X}$ ” should be “ $d\mu_{V|X}$ ”
- p. 148 line 1: “ $dF_{V|X}$ ” should be “ $d\mu_{V|X}$ ”

Section 3.2

- p. 155 in Example 3.30: “ $\log(c/x)I_{(x,c)}(\theta)$ ” should be “ $I_{(x,c)}(\theta) / [\theta \log(c/x)]$ ” and “ $(c - x) \log(\frac{c}{x})$ ” should be “ $(c - x) / \log(\frac{c}{x})$ ”. (11/4/97)

- p. 159 line -9: “ $N(0, \sigma_0^2 n)$.” should be “ $N(0, \sigma_0^2 n)$ density.” (9/12/00)
- p. 168 in Example 3.62: the denominator of the displayed formula for $R(\theta, \delta)$ should be $(\alpha + \beta + n)^2$
- p. 174 line -9: “be A ” should be “let A be”
- p. 175 lines 7–8: “of the following forms:” should be “equal (\ae [ν]) to one of the following forms:” (11/11/97)
- p. 176 first line after (3.90): “ δ ” should be “ δ^* ”
- p. 177 lines -1 and -2: “ P_0 ” should be “ P_1 ”. (9/20/01)
- p. 178 line 12: “Theorem 3.91” should be “Proposition 3.91”
- p. 179 line 3: “ μ ” should be “ ν ” (11/12/97)

Section 3.3

- p. 192 line 20, line 21, footnote 21: “Archemedian” should be “Archimedean”
- p. 193 line 4, line 8, line 10, line 15: “Archemedian” should be “Archimedean”
- p. 194 line 3: “Archemedian” should be “Archimedean”
- p. 196-197: The proof of Lemma 3.130 has an error. Fortunately, a simpler lemma will suffice. (1/21/00)
There are gif versions of revised p. 196 and revised p. 197 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advnt/pages/p197-197.ps>.)
- p. 198 footnote 30: “Archemedian” should be “Archimedean”
- p. 199 lines 6 and 7: “ $Q(B_n)$ ” should be “ $Q(A_i)$ ”
- p. 204 line 22: “ $U_x(H_1) = U_x(H_2)$ ” should be “ $U_x(H_1) = U_x(H_2)$ for $x \in D_q$ ”
- p. 205 in Theorem 3.147: “Archemedian” should be “Archimedean”

Section 3.4

- p. 209 problem 10: “ $\aleph = \Omega = (0, 1)$ ” should be “ $\Omega = (0, 1)$, $\aleph = [0, 1]$,” (11/12/97)
- p. 210 exercise 18: “Suppose that P_θ say that $X \sim Geo(\theta)$, that is,” should be “Suppose that” (9/18/00)
- p. 212 problem 33: “Archemedian” should be “Archimedean”

Chapter 4

Section 4.1

- p. 215 line -4: “ $L(v, 1) > L(v, 0)$ ” should be $L(v, 1) \geq L(v, 0)$ ” and “ $L(v, 1) < L(v, 0)$ ” should be $L(v, 1) \leq L(v, 0)$ ” (11/1/00)
- p. 216 line 18: “the 0-1 loss is sufficient.” should be “the 0-1 loss might be used.” (11/1/00)
- p. 217 line -16: “ $2\Phi(|x|)$ ” should be $2[1 - \Phi(-|x|)]$ ”

Section 4.2

- p. 219 line 5: “ $t_{n-1}(\bar{x}, s/\sqrt{n})$ ” should be “ $t_{n-1}(\bar{x}, s^2/n)$ ”
- p. 221 line 21: “ $(1 - p_1)$ ” on the bottom branch should be “ $(1 - p_0)$ ” (12/3/97)
- pp. 222, 229, 283, and 285: There are some misleading statements made about Bayes factors. (1/21/00)
There are gif versions of revised p. 222, revised p. 229, revised p. 283, and revised p. 285 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advt/pages/p222plus.ps>.)

Section 4.3

- p. 231 Example 4.36 line 2: “0.05 test” should be “0.95 test” (5/6/98)
- p. 243 line -9 “ $\theta > \theta_0$ ” should be “ $\theta \geq \theta_0$ ” (10/10/97)
- p. 246 footnote 17: “Lemma 4.78” should be “Corollary 4.80”
- p. 247 second line of proof of Lemma 4.78: remove the phrase “which satisfies the preceding inequality constraints” (10/12/00)
- p. 248 last two lines in Corollary 4.80: “ $\phi(x)$ ” should be “ $\phi_0(x)$ ” on the right-hand sides of both inequalities (4/23/99)

Section 4.4

- p. 254 line 4: “ \mathcal{B} ” should be “ B ”
- p. 254 top row of posterior risk table in Example 4.95: “ $a = 0$ ” and “ $a = 1$ ” should be switched. (4/13/99)

Section 4.5

- p. 269 line -5: “family” should be “family distribution” (11/26/97)
- p. 272: A factor was left out of three equations in Example 4.131. In addition, there is a typo on line 12 (θ_i should be Θ_i). (4/27/98)
There is a gif version of revised p. 272 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advt/pages/p272.ps>.)

Section 4.6

- p. 285 problem 2: “ $d(\theta)$ ” should be “ $d(v)$ ” (9/10/97)
- p. 285 problem 2: “ $d > 0$ ” should be “ $d \geq 0$ ” (11/1/00)
- p. 286 problem 4: “for every prior” should be “for every prior for which there exists a formal Bayes rule,” (11/1/00)
- p. 286 problem 5: “ $(0, \infty) \times \mathbb{R}$ ” should be “ $\mathbb{R} \times (0, \infty)$ ” (9/5/97)
- p. 286 problem 6: The first displayed equation should be

$$f_{\Theta|X}(\theta|x) = \begin{cases} p_1 & \text{if } \theta = \theta_0, \\ \frac{(1-p_1)\sqrt{1+\tau^2}}{\tau\sqrt{2\pi}} \exp\left[-\frac{1+\tau^2}{2\tau^2}(\theta - \theta_1)^2\right] & \text{if } \theta \neq \theta_0, \end{cases}$$

(11/24/97)

- p. 288 problem 19(d): add the hint “Read Example 4.146.” (1/21/00)
- p. 288 last line of problem 23: “level α test is the” should read “level α one-sided test is a” (4/21/99)
- p. 290 problem 36: The density should be 0 for $x < 0$. (10/5/01)
- p. 291 first line of problem 42(b): “in that” should be “in which” (10/18/00)
- p. 294 problem 65(c): “Prove that” should be “Prove that for all $\theta \in \Omega_A$ ” (12/23/97)

Chapter 5

Section 5.1

- p. 298 line 3: “estimator that” should be “estimator with finite variance that”
- p. 298 line -2: “estimator δ ” should be “estimator δ with finite variance”
- p. 298 line -1: “ $U \in \mathcal{U}$ ” should be “ $U \in \mathcal{U}$ with finite variance” (11/7/00)
- p. 312 line 1: “the difference” should be “half of the difference” (1/29/98)

Section 5.2

- p. 320 line 9: “ $1 - [n/\alpha^{1/n} - n + 1]$ ” should be “ $1 - \alpha[n/\alpha^{1/n} - n + 1]$ ” (9/16/99)

Section 5.3

- p. 333 in (5.85): “ $ell = 0$ ” should be “ $\ell = 0$ ”

Section 5.4

- p. 341 problem 15(a): “Let r ” should be “Let $r \geq 0$ ” (1/30/98)
- p. 342 problem 26 line 4: add “if $n \geq 2$ ” to the end of the sentence
- p. 343 problem 43: “ y -intercept” should be “ x -intercept” (9/28/99)

Chapter 6

Section 6.1

- p. 345 line 7: “length” should be “dimension”
- p. 347 lines -8 and -6: “ I_n ” should be “ I_{n-1} ” in both places (11/17/99)
- p. 348 and 352: There was a common oversight in the proofs of Theorems 6.10 and 6.19. (3/18/98)
There are gif versions of revised p. 348 and revised p. 352 and a postscript version. (The postscript file is in http://www.stat.cmu.edu/~mark/advvt/pages/p348_352.ps.)
- p. 351 line 17: “ $X \exp(1/n)$ ” should be “ $X_{(n)} \exp(1/n)$ ”
- p. 352 last line: “real” should be “nonzero”

Section 6.3

- p. 376 lines -4, -3: “will not apply to point hypotheses or to” should be “is not useful for point hypotheses or for”
- p. 380 line 3: “test” should be “tests” (4/2/98)
- p. 385 line 1: “ (σ, μ) ” should be “ (μ, σ) ”

Chapter 7

Section 7.1

- pp. 394 to 398: In the definitions of “small order of r_n ” and “large order of r_n ,” together with their stochastic versions, there is no benefit to allowing $\{r_n\}_{n=1}^{\infty}$ to be an arbitrary sequence of real numbers. The definitions should have been written with the requirement that $r_n > 0$ for all n . Aside from removing all of the unnecessary absolute values from the r_n s and s_n s that appear on pages 394-398, the following corrections are also needed:
 - p. 394, second line of Definition 7.1: “sequence of real numbers” should be “sequence of positive numbers”.
 - p. 395, line 3: “ c is real and nonzero” should be “ $c > 0$ ”.
 - p. 395, line 4: the last “ x ” should be “ x_n ”. (5/19/03)

- p. 395, line 14: “sequence of real numbers” should be “sequence of positive numbers”.
- p. 396, second line of Definition 7.3: “sequence of numbers” should be “sequence of positive numbers”.(3/5/01)

There is a gif version of revised p. 394, revised p. 395, revised p. 396, revised p. 397, revised p. 398, and a postscript version.

- p. 400: Theorem 7.20 should start with the sentence: “Let \mathcal{X} and \mathcal{Y} be subsets of Euclidean spaces.” (8/5/97)
- p. 401: The paragraph before Corollary 7.21 is incorrect and there is another minor typo in footnote 7. (8/5/97)
There is a gif version of revised p. 401 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advt/pages/p401.ps>.)

Section 7.2

- p. 408 last line of statement of Theorem 7.35: put parentheses around $p_{\min\{i,j\}} - p_i p_j$ (11/24/98)
- p. 411 line 6: “Example 7.30” should be “Example 7.39”
- p. 412 line 4: the right-hand side of the equation should be

$$\frac{1}{n} \left(a^2 \left[\frac{2}{p} - 4 \right] + 1 \right),$$

Section 7.3

- p. 413 line 17: “ $\sqrt{2/\pi} = 0.798$ ” should be “ $2/\pi = 0.637$ ”
- p. 413 line 18: “0.798” should be “0.637”
- p. 413 Example 7.46 line 4: “Then r is the” should read “Then $|r|$ is the” (3/21/00)
- p. 414 lines 9, 19, 22: “ \bar{X} ” should be “ \bar{X}_n ”
- p. 415 first line of Theorem 7.49: “ X_1 ” should be “ X_n ”
- p. 415: the conditions of Theorem 7.49 should include the sentence “Let Ω be a metric space.” (8/5/97)
- p. 416 line 7: “ $x \in \mathcal{X}$ ” should be “ $x \in \mathcal{X}^\infty$ ”
- p. 417 footnote 16 line 3: “Usc” should be “USC”
- p. 419 line 8: Insert the sentence “Let $X_1 = (Y_1, \dots, Y_k)$.” and the following displayed equation should begin “ $\text{Cov}_\theta(Y_i, Y_j)$ ” rather than “ $\text{Cov}_\theta(X_i, X_j)$ ”. (10/14/99)

- p. 422 line 15: “The i th coordinate” should be “The j th coordinate” (2/20/98)
- p. 426 line -4: “ $\partial^2 \psi(x, \theta) / \partial \theta^2$ is continuous in θ .” should read “ $\partial \psi_j(x, \theta) / \partial \theta_t$ exists in a neighborhood of θ_0 for all j and t .” (5/9/00)
- p. 427: Several typos appear in the statement and proof of Theorem 7.75. (10/21/99)
There is a gif version of revised p. 427 and a postscript version. (The postscript file is in <http://www.stat.cmu.edu/~mark/advnt/pages/p427.ps>.)

Section 7.4

- p. 431 line 21: “at most $\exp(-nc/2)$ ” should be “at most $m \exp(-nc/2)$ ” (10/21/99)
- p. 432 line 16: “at least $\mu_{\Theta}(C_{\delta}) \exp(nc/4)/2$ ” should be “at least $\mu_{\Theta}(C_{\delta}) \exp(nc/4)/(2m)$ ” (10/21/99)
- p. 437 line -6: “ $I_{int(\Omega)}$ ” should be “ $I_{int(\Omega)^c}$ ” (11/9/99)
- p. 445 first displayed equation in proof of Theorem 7.106: all three θ s on the right-hand side should be θ_0 . (1/14/99)
- p. 451 Figure 7.114: the horizontal axis should be labeled “ y ” rather than “ λ ”
- p. 454 line 7: “ $\psi^*(x^n)$ ” should be “ $\psi^*(x^n; \gamma)$ ”
- p. 455 line 5: “ θ' by $\hat{\theta}$ and $\psi'(\gamma)$ by $\psi^*(\gamma)$ ” should be “ $\hat{\theta}$ by θ' and $\psi^*(\gamma)$ by $\psi'(\gamma)$ ” (3/16/98)

Section 7.5

- p. 459: the conditions of Theorem 7.125 should include the following sentence “Assume that the MLE for the parameter space Ω_H is consistent also.” (8/5/97)
- p. 462 lines 8 and 14: remove “,0” from subscript of q wherever it appears
- p. 462 line 12: “ $b^{\top} a^{-1} b$ ” should be “ $b^{\top} A^{-1} b$ ” (3/10/98)
- p. 463 line -3: “matrix” should be “matrix based on one reduced observation”
- p. 467 line 20: “ $q_i(\psi)_i^Y$ ” should be “ $q_i(\psi)^{Y_i}$ ”

Section 7.6

- p. 468 problem 10 line 1: “ $N(\theta, 1)$ ” should be “ $N(\theta, 1)$ distribution”

- p. 468 problem 11 (8/14/01)
 - line 2: “ $\sin^2(z/2)$ ” should be “ $\sin^2(z/2)$ ”
 - line 4: “ 2σ ” should be “ $2\sigma^2$ ”
 - line 6: “ $c =$ ” should be “ $c = \frac{1}{\sqrt{2\pi}\sigma}$ ”
- p. 470 problem 24 line 3: “ P_r ” should be “Pr”
- p. 470 problem 24(a): Should read “Show that the relative rate of convergence (defined in Example 7.46 on page 413) of U_n to T_n is 0.” (3/20/00)
- p. 471 problem 28: “prove that” should be “prove that for each fixed θ ”
- p. 473 problem 43: “Consider the joint asymptotic distribution of $\sqrt{n}([\hat{\Theta}_n, T_n^T - \theta\mathbf{1}])$ ” should be “Assume that $\sqrt{n}([\hat{\Theta}_n, T_n]^T - \theta\mathbf{1})$ converges in distribution” (3/3/98)
- p. 474 problem 47: “Prove that there exists a subset $A \subseteq \Omega$ with $\mu_\Theta(A) = 1$ such that for every $\theta \in A$ ” should be “For each $A \in \tau$, prove that there exists $B \in \tau$ with $\mu_\Theta(B) = 1$ such that for every $\theta \in B$ ”
- p. 474 problem 48: add the sentence “Assume that Θ has a continuous bounded strictly positive prior density.”
- p. 474 problem 50(a): “Use Laplace’s” should be “Try to use Laplace’s” (2/20/98)
- p. 475 problem 51: Replace the last sentence by “Modify the Laplace approximation of Theorem 7.116 by replacing $\hat{\theta}$ by θ' and $\psi^*(\gamma)$ by $\psi'(\gamma)$ and by replacing σ_n^2 and σ_n^{*2} by observed Fisher information. Prove that the approximate Bayes factor in (4.27) is the same as this modified Laplace approximation divided by $f_\Gamma(\gamma_0)$.” (3/16/98)
- p. 475 problem 52 line 2: “ (P_1, P_2) ” should be “ $(P_1, P_2, 1 - P_1 - P_2)$ ”

Chapter 8

Section 8.2

- p. 490 line 1: “note first note” should be “first note”

Section 8.6

- p. 527 in (8.63): In the denominator of the fraction on the right-hand side, “ \sup_n ” should read “ $\sup_n n$ ”. (11/27/01)

Chapter 9

Section 9.2

- p. 557 Theorem 9.44 and second line of proof: All of the α 's and β 's that appear without subscripts (3 of each) should have subscript 0. (7/1/04)
- p. 558 line 1: " $\alpha_0 \leq \alpha_1, \beta_0 \leq \beta_1$ " should be " $\alpha_1 \leq \alpha_0, \beta_1 \leq \beta_0$ " (7/1/04)

Appendix A

Section A.1

- p. 571 line 8: "A collection" should be "A nonempty collection" (1/11/99)
- p. 575 lines 10-11: " g is μ_2 integrable" should be "the integral of g with respect to μ_2 is defined" (9/3/97)

Section A.3

- p. 582 line 19: "equals \mathcal{A} " should be "contains \mathcal{A} " (5/21/02)
- p. 584 line -2: " $f : S \rightarrow \mathbb{R}$ " should be " $f : S \rightarrow T$ " (5/19/00)
- p. 585 line -18: " $\prod_{\beta \in \mathbb{N}}^n B_\beta$ " should be " $\prod_{\beta \in \mathbb{N}} B_\beta$ " (5/21/02)
- p. 587 line 2: "Let A_{1f} " should be "Let \mathcal{A}_{1f} " (11/28/06)
- p. 587 line 13: "with respect to A_{1f} " should be "with respect to \mathcal{A}_{1f} " (1/15/02)
- p. 587 line 13: " $A_t \in \mathcal{A}_{1f}$ " should be " $A_t \in \mathcal{A}_2$ "

Section A.4

- p. 588 first line of Proposition A.49: "probability" should be "measure" (5/21/02)
- p. 589 displayed formula in Theorem A.50: " $f(s)$ " should be " $f_n(s)$ " (5/21/02)
- p. 592 line 14: " σ -finite" should "finite" (7/18/02)

Section A.5

- p. 593 line -7 " $\mu_i(A_i n)$ " should be " $\mu_i(A_{in})$ " (5/21/02)
- p. 593 line -6 "Then let $f_{B,n} =$ " should be "Then let $f_{B,n}(x) =$ " (5/21/02)
- p. 594 line 3 " $\mu_2(D_m \cap E_n)_x$ " should be " $\mu_2((D_m \cap E_n)_x)$ " (5/21/02)
- p. 594 line 8: "Lemma A.64" should be "Lemma A.61" (1/18/99)
- p. 594 line -10: " $\nu_1((B_n)_x)$ " should be " $\nu_1(B_n)$ " (1/16/01)
- p. 595 Lemma A.67: Insert the sentence "Assume the conditions of Lemma A.64" at the start. (5/21/02)

- p. 596 line -12: “ $\int |f(x, y)d\mu_2(y)$ ” should be “ $\int |f(x, y)|d\mu_2(y)$ ” (5/21/02)

Section A.6

- p. 598 line 1: “is μ_2 integrable” should be “and the integral of g with respect to μ_2 is defined” (9/3/97)
- p. 599 line -21: “ $A = \cup_{k=1}^{\infty}$ ” should be “ $A = \cup_{k=0}^{\infty}$ ” (5/21/02)
- p. 599 line -13: All three E ’s in this displayed equation should be A ’s. (5/21/02)
- p. 599 lines -9, -8: “integrable functions” should be “functions whose integrals are defined” (9/3/97)
- p. 600 line 23: “all $x \in C_0$ ” should be “almost all $x \in C_0$ ” (8/5/97)

Section A.7

- p. 603 problem 13: In line 1 “measurable spaces” should be “measurable spaces such that \mathcal{A}_3 contains all singletons”

Appendix B

Section B.1

- p. 609 line 4: add “and $B = Y^{-1}(C)$ ” to the end of the sentence (9/4/01)

Section B.2

- p. 612 line 4: “an so” should be “and so” (5/21/02)
- p. 613 line 9: “ $h : X \text{ :->}$ ” should be “ $h : \mathcal{X} \rightarrow$ ” (5/21/02)

Section B.3

- p. 633 line 2 of Theorem B.75: “measurable” should be “Borel”
- p. 639: The proofs of two parts of Theorem B.90 have errors, a small typo in the proof of part 3 and an unwarranted claim in part 2. The proof of part 2 is actually made simpler.
There is a gif version of revised p. 639 and a postscript version. (1/29/02)
(The postscript file is in
[http://www.stat.cmu.edu/~mark/advt/pages/p639.ps.](http://www.stat.cmu.edu/~mark/advt/pages/p639.ps))
- p. 643, Example B.100: Insert “, with $\sigma > 0.$ ” at the end of the first sentence. (10/15/08)

Section B.5

- p.650 line 2 in proof of Theorem B.124: “ $\lim_{n \rightarrow -\infty}$ ” should read “ $\lim_{n \rightarrow \infty}$ ”. (2/8/02)

Section B.7

- p. 661 line 5: “ $U^2 < f(X)$ ” should be “ $U^2 > f(X)$ ”
- p. 661 problem 1: In lines 2-3 “the probability that” should be removed.

Section B.8

- p. 662 problem 6: In line 3 “ \sum_1^∞ ” should be “ $\sum_{n=1}^\infty$ ”
- p. 662 problem 7: The displayed formula should be

$$F_{X,Y}(x, y) = \begin{cases} \frac{\Phi(y)}{2} + \frac{\Phi(x-1)}{2} & \text{if } y - 1 \leq x < y + 1, \\ \Phi(y) & \text{if } x \geq y + 1, \\ \frac{\Phi(x+1)}{2} + \frac{\Phi(x-1)}{2} & \text{otherwise.} \end{cases}$$

- p. 673 line 3: “ $(1 - p)^{1-x}$ ” should be “ $(1 - p)^{n-x}$ ”

Index

- p. 691: “Chibb” should be “Chib” (9/10/01)
- p. 694: “Archemedian” should be “Archimedean”

Updates to the reference list:

- page 683: Kadane, Schervish, and Seidenfeld (1996) has appeared and the page numbers are 1228–1235.
- page 686: Schervish (1996) has appeared and the page numbers are 203–206.