A COURSE IN LARGE SAMPLE THEORY
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MAIN ERRATA
last update: April 2002

Page 4, line -4. Delete "i", the first character.

Page 6, line 15. $\mathbf{X}_0$ should be $\mathbf{x}_0$.
Line 17. F should not be bold face.

Page 12, last line. Write $EX_n^2 \to EX^2 < \infty$.

Page 25, line 10. X should be H.

Page 26, line -6. Second bold face zero should be $\mathbf{0}^T$.

Page 41, line 12. $=$ should be $\leq$.

Page 47, line 7. x_1^2 should be χ_1^2.

Page 48, line 5. Should be $\gamma_n = \sqrt{n}\mu/\sigma$.

Page 49, Exercise 3(a). Assume $\mu \neq 0$. What if $\mu = 0$?

Page 50, line 8. x_x^2 should be s_x^2.

Page 51, line -7. "$6.111\ldots$" should be "6".

Page 71, line -13. $> \epsilon$ should be $< \epsilon$.

Page 72, line 11. $s/n \to 1/(k+m)$, and $\mathcal{N}(0, \mathrm{Var}(S_k)/(k+m))$.
Line 17. $\mathrm{Var}(S_k)/(k+m) \to \sigma^2$.

Page 76, line 18. "variance" should be "standard deviation".
Line 22: "like" should be "likely".

Page 78, line 7. σ_2^2 should be σ_z^2.

Page 79, lines -8 and -3. [should be $\lceil$, and] should be $\rceil$.

Page 81, line 5 to 6. "$(n-N)$" should be "$(N-n)$".

Page 82, line -6. Change "is bounded" to "is bounded below by 1".

Page 84. The second displayed equation should be changed to

$$\frac{S_N - ES_N}{\sqrt{\mathrm{Var}(S_N)}} = \frac{\sqrt{n}(n^{-1}S_N - \bar{z}_N)}{\sqrt{\sigma_z^2(1-(n/N))}} \xrightarrow{\mathcal{L}} \mathcal{N}(0,1)$$

Below this expression, add "We may estimate σ_z^2 by s_z^2, the variance of the observed values."

Page 84, lines -13 and -21. s_z^2 should be σ_z^2.

Page 99, line -1. $1/2 \log 4\pi$ should be $(1/2) \log 4\pi$.

Page 108, line -4. "A real-valued function" should be "An extended real-valued function".

Page 109, line -8. The proof must be changed because $\mu(\theta)$ could be $-\infty$.
Lines -1 and -3, and page 110, lines 1 to 4: Each X_j should be X_i and each summation should be over i from 1 to n.

Page 112, line -6. "may be" should be "may not be".

Page 127, line -6. $f(x|\alpha) = \exp\{$ (delete the α).
Line -4. $\theta(\alpha)$ should be $g(\alpha)$.

Page 129, line -11. $\hat{\theta}^2$ should be $\tilde{\theta}^2$.

Page 135 and following. $\dot{\ell}$ has been defined as a row vector, so here and often in the following $\dot{\ell}$ should be replaced by $\dot{\ell}^T$.

Page 137, line -3. $\Gamma-$ should be digamma.

Page 155 line 3. This should be written

$$\chi_N^2 = \frac{(n_1 - n(\frac{1}{3} - \theta))^2}{n_1} + \frac{(n_2 - n(\frac{2}{3} - \theta))^2}{n_2} + \frac{(n_3 - 2n\theta)^2}{n_3}.$$

Page 160, line -9. This display should read

$$\|\Pi Z_n - A(\theta_n^*)\|^2 \leq (d_n + \epsilon_n)^2 - (d_n - \epsilon_n)^2 = 4 d_n \epsilon_n,$$

Pages 159-161. Unfortunately, Π is used in two different senses. One way to correct this error is to state, after the proof of Corollary 2, that in the rest of the chapter we translate $A(\theta_0)$ to the origin. (Then the two Π's are the same.)

Another way is as follows. Before Lemma 2, add: Let $\phi(z)$ be the projection of z onto the tangent space at $A(\theta_0)$. Then $\phi(z)$ is the affine transformation

$$\phi(z) = A(\theta_0) + \Pi(z - A(\theta_0)).$$

Then, in Lemma 2 and its proof, replace everywhere ΠZ_n by $\phi(Z_n)$ and $\Pi A(\theta_n^*)$ by $\phi(A(\theta_n^*))$. In addition the second display on page 161 may be written

$$\sqrt{n}(A(\theta_n^*) - A(\theta_0)) \sim \sqrt{n}(\phi(Z_n) - A(\theta_0)) = \sqrt{n}\Pi(Z_n - A(\theta_0)),$$

and in the beginning of the proof of Theorem 24, one may replace "From Lemma 2 of Section 23," by "From the proof of Theorem 23,".

Page 172, line 7. $\mathcal{B}(1, \beta/(\alpha+\beta))$ should be $\mathcal{B}(1, \alpha/(\alpha+\beta))$.
Lines -13 and -12. a should be α, twice.

Page 179, lines -10 and -9. Factor of c omitted.

Page 194, line 10. χ^2_{c-1} should be χ^2_r.

Page 215, line 7. $K(X)$ should be $\exp\{K(X)\}$.
Line 10. $\phi(x, \theta, X)$ should be $\phi(x, \theta, \rho)$.
Line -11. The formula should read

$$L(\theta) = \left(\frac{2}{\theta}\right)^k \left(\prod_{i \le k} X_{(i)}\right) \cdot \left(\frac{2}{1-\theta}\right)^{n-k} \left(\prod_{i>k} (1 - X_{(i)})\right).$$

Page 221. There is no Problem #8. Use Additional Exercise Section 19, #1.

Page 228, line 3. μ and σ should be α and β respectively.

Page 229, line 11. $\phi(\pi(\theta))$ should be $\dot{\phi}(\pi(\theta))$.

Page 234, line 6. $n_{..jk}$ should be $n_{..k}$.

MINOR ERRATA
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Page viii, line 10. Delete the comma.

Page 5, line 7. Comma between n and X_n.
Next line, remove absolute value signs around Y.

Page 8, lines 12 and 13, and page 9, lines -9, -8 and -6. The ϵ's should be $\in$.

Page 11, lines 22-23. Superposition of indices.
line -8, use $E|X_n - X|^2$ instead of $E(X_n - X)^2$.

Page 16, line -3. Need closing curly brace for exp.

Page 20, line 4. $\dot{g}(x)$ should be $\dot{\mathbf{g}}(\mathbf{x})$.

Page 21, line 1. Change t' to t^T.
Line 3. bold face 0.
Line -11. bold face epsilon.

Page 23, line -13. Wrong symbol for epsilon.

Page 26, line -6. μ should be bold face μ.

Page 27, line 15. "ad" should be "and".

Page 34, line 2. Both X should be bold face.
Line 14: "3" should be "3.".

Page 45, line 4. 0 should be bold face 0.

Page 63, line -12. Σ should be bold face Σ.

Page 64, line -3. The first $\mathbf{Y}$ should be $\mathbf{Y}^T$.

Page 72, line -4. J should be j.

Page 73, line -12. First summation should be over i.
Line -6. "ad" should be "and".

Page 75, first display. The sum should be over j.

Page 77, line -3. Lindeberg (sp.)

Page 91, line 4. Bracket in subscript of first X should be parenthesis.

Page 95, line -11. "extremal" should be "extreme value".

Page 97, line 12. $n \to \infty$ should be below lim.

Page 103, line 7. $Z_{1,N}$ should be $Z_{1,n}$.

Page 109, line 6. The U should be slanted.

Page 112, line -12. Bold face L should be plain face.

Page 113, line 13. "convex" should be "concave".
Line 17. Integration should be over S_0.

Page 115, line -6. Parthasarathy (sp.).

Page 119, line 4. The partial derivative should be over bold face θ.
Line -4. Add a space after the word "of".

Page 120, line 7. $f(x\theta)$ should be $f(x|\theta)$.

Page 122, line -5. In $\mathcal{N}(0, \mathcal{I}(\theta_0)^{-1})$ the 0 should be bold face.

Page 126, display (1). $f(X, \theta)$ should be $f(X|\theta)$.

Pages 126 to 128. Too much space between $\hat{\theta}$ and (X), (eight times).

Page 127, lines 9-10. "coefficient".
Line -14. "if and only if".

Page 130, line -11. A θ should be made bold face.

Page 131 lines -10 and -11. Delete the equal sign and the digamma sign.

Page 132, line 1. "Checking" should be "Check".

Page 145, last 5 lines. θ_0 should be bold face (3 times).

Page 147, line 6. The second [should be].

Page 148, line -3. The second [should be].

Page 155, lines -7 and -8. The sum is over j, so i should be j, and the subscript 1 should be j.

Page 157, line -2. $(a - z_i)$ should be $(a_i - z_i)$.

Page 175, line -3. Schwarz (sp.).

Page 180, line -2. Missing right parenthesis at end of line.

Page 201, line 13. $(m/N \to r)$ should be $(m/N - r)$.

Page 210, line 12. N should be n.

Page 216, line 7. "and" should be "are".
Line 10. Delete "(c)". The answer to part (c) seems to have been omitted.

Page 218, line -3. The $=$ should be $>$.

Page 224, line 4. Romove the last).

Page 233, last 4 lines and page 234 first 8 lines. The double dot subscripts are hard to read.

Page 239. Cauchy (sp.).

Page 244. Schwarz (sp.).