Errata for *Statistical Inference, Second Edition* (First Printing)
Last Update: August 9, 2002

page 7) line 15 ↑: " Axiom 1" should be "Axiom 2"

page 19) Figure caption: "$\{2, 4, 4, 9\}$ " should be "$\{2, 4, 9, 12\}$"

page 39) Exercise 1.16: "(b) " should be "(c)"

page 40) Exercise 1.29: (a) and (b) are the same. Replace part (e) with:
Establish that the number of multinomial coefficients, and hence the number of distinct bootstrap samples, is $\binom{k+m-1}{k}$. In other words,

$$\sum_{k_1,k_2,\ldots,k_m} I_{\{k_1+k_2+\cdots+k_m=k\}} = \binom{k+m-1}{k}$$

page 41) Exercise 1.31: "$\frac{29}{4}$ " should be " $\frac{27}{4}$"

page 43) Exercise 1.43: " $i \geq j$ " should be "$i \leq j$ "

page 55) line 13 ↓: "random number V " should be "random number U"

page 76) Exercise 2.7(b): "$A_1 = (-2, 0)$ and $A_2 = (0, 2)$" should be " $A_1 = (-1, 1)$ and $A_2 = (1, 2)$"

page 80) Exercise 2.29: The pmf should be

$$P(y = y) = a\left(\frac{1}{y+a}\right)\frac{\binom{n}{y}\binom{a+b-1}{a}}{\binom{n+a+b-1}{y+a}}$$

(replace $(y + a)$ with $1/(y + a)$)

page 83) last line : " $t = 1$" should be "$t = 0$"

page 84) line 14 ↓: "for all X" should be "for all x"; line 12 ↑: "mgf$s$" should be "pdf$s$"; line 4 ↑: " constrast" should be "contrast"

page 132) Exercise 3.30b: "beta(a, b) " should be " Poisson(λ)"

page 132) Exercise 3.31a: delete "$f(x|\theta) =$ "

page 132) Exercise 3.31b:"$\frac{d^2}{dx^x}$" should be "$\frac{d^2}{dx^2}$"

page 168) line 6 ↑: " $\frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)}$" should be "$n\frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)}$"

page 188) first line: The title of the example should be "**(Covariance Inequality - I)**"

page 192) first line: The title of the theorem should be "**(Covariance Inequality - II)**"

page 193) last line : " (2.2.4)" should be "(2.2.3)"

page 194) Exercise 4.16c: "pdf " should be "pmf "

page 198) Exercise 4.37(a): "is beta-binomial " should be "is a mixture of beta-binomials "

page 203) Exercise 4.65: "Covariance Inequality " should be " Covariance Inequality - II"

page 231) line 10 ↑: "r " should be "R"

page 265) Exercise 5.58a: add "if $0 \le t \le 1$ "

page 279) line 7 ↑: "$c(\theta)$" should be "c($\boldsymbol{\theta}$)"

page 283) line 5 ↓: " (5.5.7)" should be "(5.4.7)"

page 288) display 6.2.7: "$w(\theta_j)$ " should be "$w_j(\boldsymbol{\theta})$"

page 288) line 14 ↓: " *as long as the parameter space* Θ" should be "if $\{(w_1(\boldsymbol{\theta}), \ldots, w_k(\boldsymbol{\theta})) : \boldsymbol{\theta} \in \Theta)\}$"

page 304) Exercise 6.31b(ii): "$\sum_i X_j$" should be "$\sum_i X_i$"

page 304) Exercise 6.33a: Second display should be

$$g(T(j, \mathbf{x}_j|\theta)h(j, \mathbf{x}_j) = f^*((j, \mathbf{x}_j)|\theta)$$

page 333) line 5 ↓: "For an estimator $W(\mathbf{X})$ of θ, using the principles of Measurement Equivariance and Formal Invariance, we have " should be "For a fixed g in the group $\mathcal{G}$ denote the function that takes $\theta \to \theta'$ by $\bar{g}(\theta) = \theta'$. Then if $W(\mathbf{X})$ estimates θ we have"

page 358 Exercise 7.18a: In $\tilde{\rho}$ "$\hat{\sigma}_X\hat{\sigma}_Y$" should be "$\tilde{\sigma}_X\tilde{\sigma}_Y$"

page 363) Exercise 7.45b: "$E[X-\mu]^4$ " should be " $E[X-\mu]^4/\sigma^4$"h

page 363) Exercise 7.45d: "$(\kappa - 1)$ " should be " $(\kappa - 3)$"

page 410) Exercise 8.43: The t statistic should be

$$\frac{(\bar{X} - \bar{Y}) - (\mu_1 - \mu_2)}{\sqrt{\frac{1}{n_1} + \frac{\rho^2}{n_2}}\sqrt{\frac{(n_1-1)s_X^2 + (n_2-1)s_Y^2/\rho^2}{n_1+n_2-2}}},$$

and the F statistic should be $s_Y^2/(\rho^2 s_X^2)$. Here s_Y^2 and s_Y^2 are the sample variances from the two samples. Also, in the F statistic the numerator degrees of freedon should be $n_2 - 1$ and the denominator degrees of freedon should be $n_1 - 1$.

page 458) Exercise 9.43: "the interval will be " should be "the interval on θ will be "

page 462) Exercise 9.57(b): "$\bar{x} \pm z_{\alpha/2}\sigma\left(1 + \frac{1}{\sqrt{n}}\right)$ " should be " $\bar{x} \pm \sigma\left(z_{p/2} + \frac{z_{\alpha/2}}{\sqrt{n}}\right)$"

page 477) last display should be

$$ARE(\hat{\mu}, \bar{X}) = [\beta\mu]\left[\mathrm{E}\left(-\frac{d^2}{d\mu^2}l(\mu, \beta|X)\right)\right]$$

page 488) first line: "$\mathrm{E}_\theta\psi(x - \theta)$ " should be "$\mathrm{E}_\theta\psi(X - \theta)$ "

page 505) Exercise 10.5(c): " approaches 0" should be " approaches 0 as $n \to \infty$"; Exercise 10.7: "In the proof of Theorem 10.1.6" should be "In the proof of Theorem 10.1.12"; Exercise 10.7: "$\tau(\theta)$ is a continuous function" should be "$\tau(\theta)$ is a continuous and differentiable function"

page 507 Replace Exercise 10.15:

(a) Show that $\mathrm{Var}^*_B(\hat{\theta})$ of (10.1.11) converges to $\mathrm{Var}^*(\hat{\theta})$ of (10.1.10) as $B \to \infty$.

(b) For fixed B and $i = 1, 2, \ldots$, calculate the bootstrap variance $\mathrm{Var}^*_{B_i}(\hat{\theta})$. Use the Law of Large Numbers to show $(1/m)\sum_{i=1}^{m} \mathrm{Var}^*_{B_i}(\hat{\theta}) \to \mathrm{Var}^*(\hat{\theta})$ as $m \to \infty$.

page 508) line 2 ↓: "(q)d " should be "(d)"; line 4 ↓: "(q)e " should be "(e)"; line 5 ↓: "(q)d " should be "(d)"

page 508) Exercise 10.19(b): In the display, the expression in parentheses should be $n - \frac{1-\rho^n}{1-\rho}$

page 509) Exercise 10.25: "where $\psi = \rho'$. " should be " where $\psi = \rho'$ is an odd function."

page 514) Exercise 10.41(a): "(10.4.3) " should be "(10.4.1) "

page 553) Equation (11.3.30): "Y_i " should be "Y_j "

page 594) last line: "x_i" should be "x_j" (2 times)

page 605) Exercise 12.15(g): " = 1" should be "$= \beta$ "