Errata for Third Edition

March 24, 2014

5 Insurance Coverage Modifications

1. In the solution to end-of-chapter Problem 3, the third equation should read:

$$E(X \wedge d) = \frac{\theta}{\alpha - 1}\left[1 - \left(\frac{\theta}{d+\theta}\right)^{\alpha-1}\right]$$

   The expression for $E(X \wedge d)$ in the right hand side of the second line of $E(Y^L)$ should be changed similarly.

6 Aggregate Loss Models

1. In the solution to end-of-chapter Problem 15, the second equation should read: $100(1 - F(800)) = E[(S-800)_+] - E[(S-900)_+] = 40 - 30 = 10$, which implies $F(800) = 0.9$ and $f(900) + f(1000) = 0.07$.

2. In the solution to end-of-chapter Problem 20, the probability calculation mistakenly used the variance in the denominator rather than its square root (standard deviation). Using the standard deviation in the denominator gives the correct answer of 0.7257.

7 Mathematical Statistics

1. In Example 7.14, the confidence interval should be $10 - 1.96\frac{1}{\sqrt{100}} \leq \mu \leq 10 + 1.96\frac{1}{\sqrt{100}}$, which simplifies to $9.804 \leq \mu \leq 10.196$.

9 Analyzing Modified Data

1. In Example 9.12, the calculation for $\widehat{Var}(S_{719}(2))$ should use $S_{719}(2) = 0.03755$.

2. In the solution to end-of-chapter Problem 18, the variance calculation should be: $\widehat{Var}(\hat{S}(13)) = \hat{S}(13)^2 \sum_{i=1}^{5} \frac{s_i}{r_i(r_i - s_i)} = 0.4^2(0.15) \approx 0.024$.

3. In the solution to end-of-chapter Problem 20, the variance recursion quantity should be $\widehat{Var}(\hat{H}(y_{j+1})) = \widehat{Var}(\hat{H}(y_j)) + \frac{s_{j+1}}{r_{j+1}^2}$.

11 Parametric Estimation

1. In the solution to Example 11.25, we should have $\nabla g(\mu,\sigma)^T \frac{\Sigma}{n} \nabla g(\mu,\sigma) = 0.0714$. The left hand side, as written, is missing a "∇".

2. In the solution to end-of-chapter Problem 20(a), the log-likelihood for a single observation x is $\ln f(x) = \ln 3 + 2\ln x - \left(\frac{x}{\theta}\right)^3 - 3\ln\theta$.

12 Bayesian Estimation

1. In the solution to Example 12.14(c), the last equation should have a "$\int$" in front.
2. The first sentence of the solution to end-of-chapter Problem 3 should read "...the number of claims you have per year is binomial with $m = k$...".
3. The solution to end-of-chapter Problem 13(b) should be the posterior mean $11(1.675) = 18.425$.

13 Model Selection

1. In Example 13.4(c), the estimated parameter in the censored model should be $\hat{\theta}_{MLE} = 890.38$.
2. In Example 13.7, use a significance level of $\alpha = 0.05$.
3. The statement of the end-of-chapter Problem 2 should ask for censoring *above* 2200.
4. The solution to the end-of-chapter Problem 1 should have used $F(100) = 1 - e^{-100/\theta}$, which produces a final answer of $\hat{\theta}_{MLE} = 970.14$.

14 Simulation

1. In the solution to end-of-chapter Problem 8, $s^2 = 8.9333$. The required $n = 894$.
2. The solutions to end-of-chapter Problems 9 and 10 erroneously used s^2 to denote s, the sample standard deviation.
3. The solution to end-of-chapter Problem 15 should compute $s_p^2 = 121.6667$, which results in a confidence interval of $(131.72, 161.28)$.
4. In the end-of-chapter Problem 19, the first set of uniform values are used to simulate the number of claims per year, not the time between claims.
5. In the statement of the end-of-chapter Problem 23, we should have $s^2 = \frac{\sum(X_i - \bar{X})^2}{3}$.

15 Traditional Credibility

1. In Example 15.7, the first sentence of the answer should read "Recall that the number of claims required was 1082."
2. In the solution to Problem 7 in Section 15.1.2, $K(1-q) = 0.8K$, so the resulting ratio is 1.25.
3. In the solution to Problem 4 in Section 15.1.5, $\sqrt{N_2} = \sqrt{5N}$, for an answer of $N_2 = 5N$.
4. In the solution to Problems 12 and 13 in Section 15.2.6, we should have $k = \frac{EPV}{VHM} = \frac{175}{204.011} = 0.8578$, resulting in final estimates of 228.75 in Problem 12 and 225.97 in Problem 13.