ERRATA LIST FOR APPLICATIONS OF MONTE CARLO METHODS TO
FINANCE AND INSURANCE, FIRST EDITION
September 10, 2010

Page vii, in the heading for Section 2.3.1, "Generator" should be "Generators".

Page 4, line 16, add a period after "method".

Page 7, line 17, "In year 1990+x" should be "in year 1990+x".

Page 10, line 6, "random generator" should be "random number generator".

Page 10, line 11, "wide-range" should be "wide range".

Page 10, the equation at the bottom of the page should be " $U(k) = \left\lfloor 10^k \cdot U \right\rfloor \mod 10$ ".

Page 19, lines 10 and 11, ".517" should be ".50" and ".86" should be ".0806".

Page 25, lines 21-22, " $2^m - 1$, where m is a prime number" should be " $2^d - 1$, where d is a prime number".

Page 30, line 1, "f(x)" should be "F(x)".

Page 30, line 10, "≤(x)" should be "≤F(x)".

Page 35, the equation at the top of the page should be: $x = \beta \cdot [-\ln(1-u)]^{1/\alpha}$.

Page 36, penultimate line, "[(b-a)u]" should be " $\lfloor (b-a)u \rfloor$ ".

Page 37, line 1, "U is a random variable having" should be "u is an output value drawn from".

Page 39, in Step 5, "CS+R" should be "CS+PR".

Page 40, line 2, "mean λ" should be "mean 1/λ".

Page 40, line 5, " $p = e^{-\lambda}$ " should be " $p = 1 - e^{-\lambda}$ which implies that $\lambda = -\ln(1-p)$ ".

Page 40, line 9, "mean $\lambda = -\ln(1-p)$ " should be "mean $1/\lambda = -\dfrac{1}{\ln(1-p)}$ ".

Page 40, line 12, "exponential distribution" should be "geometric distribution".

Page 43, "h(x: n, M, N)" should be "h(x| n, M, N)".

Page 46, line 15, "$\sum_{i=1}^{X+1} \frac{1}{\lambda} - \cdot \ln U_i$" should be "$\sum_{i=1}^{X+1} -\frac{1}{\lambda} \cdot \ln U_i$".

Page 50, Exercise 3-10 and accompanying footnote, in the death probabilities the symbol "|" should be written as a subscript; e.g., as $_{1|}q_{70}$. (There are three instances of this.)

Page 51, line 1, before "interest rate" add "annual".

Page 52, Exercise 3-14, "s" should be "s_i".

Page 53, line 8 of Exercise 3-16, ".02" should be ".20".

Page 55, line 7, delete comma after "(say F(x))".

Page 56, line 4, "envelopes" should be "envelops".

Page 57, line 2, ">" should be "<".

Page 63, in Step 4, "v" should be "y".

Page 66, line 5 of Section 4.1.2, the equation should be: $g(x) = e^{-(x-1)^2/2}$.

Page 67, line 6, "$x \leq 0$" should be "$x \geq 0$"

Page 72, line 5, after "parameter λ" add "(i.e., mean $1/\lambda$)".

Pages 77 and 78, replace the last two sentences of the first paragraph of Section 4.4 by: "For example, if g(x|y) is Poisson with mean, y, and $H_Y(y)$ is gamma, then $f_X(x)$ will be negative binomial."

Page 78, rewrite footnote 4 as: "This result is derived on page 158 of Herzog[29]."

Page 79, line 2, in the equation "a" should be "α" – this occurs twice.

Page 89, line 9, "investigates" is not spelled right.

Page 91, lines 3 and 6 of Exercise 4-1 as well as line 6 of Exercise 4-2, "g(x)" should be "h(x)".

Page 91, line 6 of Exercise 4-3, "are used" should be "is used".

Page 93, penultimate line, ".64" should be ".064".

Page 94, last line, "variables" should be "values".

Page 98, line 2, "$\dfrac{H}{n}$" should be "$\dfrac{h}{n}$".

Page 100, the last equation of Example 5.3 should be replaced by the following:

$$\frac{\theta}{n}[c(b-a)-\theta] = \frac{(.14758)}{n}\left[\left(\frac{1}{\pi}\right)(.5-0)-.14758\right] = \frac{.001708}{n}$$

where $c = \sup\limits_{a\le x\le b} f(x) = \sup\limits_{0\le x\le .5} \dfrac{1}{\pi\left(1+x^2\right)} = \dfrac{1}{\pi}.$

Page 108, line 9, "Exercise 5-1" should be "Exercise 5-7".

Page 120, in Section 5.7.2, we wish to clarify the mathematical definition of p(x) is

$$p(x) = \frac{1}{b-a} \quad \text{for} \quad a \le x < b.$$

Moreover, as stated at the top of page 121, our goal is to estimate

$$\theta = \int_R f(x)dx = \int_R g(x)\cdot p(x)dx.$$

Page 124, line 9 of Section 5.8, "Exercise 5-x" should be "Exercise 5-19".

Page 127, heading of third column of Table 5.7, "Monte" should be "Monte Carlo".

Page 136, first line of Section 6.2, add a semi-colon after "$[0,1)^s$".

Page 136, Section 6.2, line 6 as well as penultimate line, "Lebesque" should be "Lebesgue".

Page 137, line 8, "parallelopipeds" should be "parallelepipeds".

Page138, line 9, delete "(See the exercises at the end of the chapter.)".

Page 147, Sec. 6.5.6, line 2, "mortgages" should be "mortgage".

Page 147, line 4, "$\phi_p(N)$" should be in bold type.

Page 149, Section 6.7.2.1, line 4, "psuedo" should be "pseudo".

Page 155, in Exercise 6-11, "Halton" should be "Hammersley" in two places.

Page 155, Exercise 6-12, "$\phi_3^3(12)$" should be "$\phi_3(12)$" **in bold type**.

Page 161, line 9, "6,000" should be "5,973".

Page 165, Exercise 7-2, "d=.30" should be "d=.20".

Page 165, Exercise 7-3, "α=.20" should be "α=.02".

Page 166, Exercise 7-8, add a question mark at the end of the exercise.

Page 166, Exercise 7-10, add a period at the end of the exercise.

Page 166, Exercise 7-11, add a period at the end of the exercise

Page 170, lines 9 and 10, replace "$= \dfrac{S^2}{n} = \dfrac{1}{n(n-1)} \cdot \sum_{i=1}^{n} (X_i - \overline{X})^2$" by

"$= \dfrac{\sigma^2}{n}$ where $\sigma^2 = \text{Var}[X_i]$".

Page 171, in the equation at the bottom of the page, "9,185.42" should be "8,775" -- two occurrences of this typo.

Page 174, Exercise 8-2, remove space after "8-2".

Page 174, Exercise 8-3, line 3, "5.Use" should be "5. Use".

Page 175, line 3, "$\theta(F')$" should be "$\theta(F)$"

Page 178, line 14, "it is does" should be "it does".

Page 183, Sec. 9.4, line 4, add a period at the end of the sentence.

Page 187, Step 5, "$\geq d$" should be "$\geq d_n$".

Page 190, the last three lines of the page should read:

"square statistic (with 17 degrees of freedom – three parameters are estimated from the data) is equal to 26.1. This is not significant at the 5% level of significance. The values of the two Herzog loss functions are 3.67 and 3.76, respectively."

Page 191, replace "with 12 degrees of freedom" by "with 9 degrees of freedom – 3 are estimated from the data".

Page 194, Exercise 9-5, in the equation the exponent should be "3.5" rather than "35".

Page 202, line 3 of last paragraph, add "obtain" after "enable the analyst to".

Page 205, Table 10.4, the total "Period Cash Flow" should be "$12,194.55" instead of "$9,755.64".

Page 216, five lines from the bottom, "density functions" should be "density function".

Page 221, line 6, "sales" should be "sale".

Page 224, lines 1 and 19, "Basle" should be "Basel".

Page 226, line 7, should read "$\sigma_L = \sqrt{T} \cdot \sigma$" rather than "$\sigma_L = T \cdot \sigma$"

Pages 226-227, in Example 12.2, replace all instances of ".01667" by ".057735"; also, the last equation should be "VaR = $8.455 million" instead of "VaR=$2.058 million"

Page 230, line 13, "individual variances" should be "individual variances of the components, weights included"

Page 248, answer to Exercise 3-12 should be .216.

Page 249, answer to Exercise 5-4 should be "1,094.97".

Page 250, answer to Exercise 5-11(b) should be .001335.

Page 252, answers to Exercise 9-6 should be .7104 and .8784.

Page 253, reference number 5, "reliability" should be "Reliability".

Page 258, add a period at the end of reference number 60.

Page 261, "Browninan" should be "Brownian".

Page 263, under "Quasi-random sequences", "low disrepance" should be "low discrepancy".

Page 264, in the entry for Value at Risk, delta normal method, "28-230" should be "228-230".