ERRATA

1. Page 14, line 3 of Theorem 1 should read

$$E_Q(S_1^j) = (1+r)S_0^j \text{ for all } j = 1,...,N$$

2. Page 16, equation (2.4) should read

$$E_Q(S_1^j) = (1+r)S_0^j$$

3. Page 76: Chapter 2, problem 17. (Note the sentence in bold face below is missing from this problem). Consider a defaultable bond which pays a fraction of its face value Fp on maturity in the event of default. Suppose the risk free interest rate continuously compounded is r so that $B_s = \exp(sr)$. Suppose also that a constant coupon \$$d$ is paid at the end of every period $s = t+1, ..., T-1$.**Assume that the risk-neutral probability of a default in the next unit of time is $1 - e^{-k}$ and the probability of no default in this period is e^{-k} for some value of $k > 0$.** Then show that the value of this bond at time t is

$$P_t = d\frac{\exp\{-(r+k)\} - \exp\{-(r+k)(T-t)\}}{1 - \exp\{-(r+k)\}}$$
$$+ pF\exp\{-r(T-t)\} + (1-p)F\exp\{-(r+k)(T-t)\}$$

4. page 78, problem 17 (see solutions)

5. Page 149; (correction in bold) More generally for a CEV process satisfying

$$dX_t = k(b - X_t)dt + \sigma X_t^{\gamma/2} dW_t \tag{3.34}$$

a similar calculation shows that the stationary density is proportional to

$$x^{-\gamma}\exp\{-\frac{2kb}{\sigma^2}\frac{1}{x^{\gamma-1}(\gamma-1)} - \frac{k}{\sigma^2(\mathbf{2}-\gamma)}x^{\mathbf{2}-\gamma}\}, \text{ for } \gamma > 1, \boldsymbol{\gamma} \neq \mathbf{2}.$$

6. Page 161: Chapter 3, question 24 (bolded lettering should be added).:Suppose interest rates follow the constant elasticity of variance process of the form

$$dr_t = k(b - r_t)\mathbf{dt} + \sigma|r_t|^\gamma dW_t$$

7. page 188, line 19 should read " , $K(t)$ is convex increasing (for a positive random variable),...."

8. Page 203: chapter 4, problem 1 (b) add phrase in bold: How large a sample size would I need, using antithetic and crude Monte Carlo, in order to estimate the above integral, **correct to within 0.0001**, with probability at least 95%?

9. Page 242: chapter 5, question 1 should read
   Suppose the values of d_j are equally spaced, that is if $d_j = j\Delta, j = ..., -2, -1, 0, 1, ..., S_0 = 0, S_T = C$, and $u \geq 0$. Show that

$$E[H|C = u] = u + \Delta \frac{P[C > u \text{ and } \frac{C-u}{\Delta} \text{ is even}]}{P[C = u]}.$$

   Similarly, if $u < 0$,

$$E[H|C = u] = \Delta \frac{P[C > -u \text{ and } \frac{C+u}{\Delta} \text{ is even}]}{P[C = u]}.$$

10. Page 243, line 9 should read $\{(x, y); y < \exp(-x^2/2)\}$

11. Page 363, Chapter 8, Question 7: **(Note:** $\ln(S_T)$ **should replace** S_T **in book and the parameter** $\sigma = 0.2$ should be given**)**