

# ERRATA FOR FIRST PRINTING OF *TIME SERIES ANALYSIS: WITH APPLICATIONS IN R*

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Last updated 3/25/2013

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- 10 Exercise 1.6 Should refer to Exhibit 1.7 on page 6 rather than Exhibit 1.9, page 7.
- 22 Exercise 2.21 In part (d),  $\sigma_a^2$  should be  $\sigma_e^2$  in two places.
- 30 At the top of the page  $e_1 + 2e_2 + 3e_3 + \dots + ne_n$  should be replaced by  $ne_1 + (n-1)e_2 + \dots + e_n$ .
- 34 Eqn. (3.37) There is a minus sign missing on the righthand side of the second equation. It should read  

$$\beta_1 = \beta \cos(\Phi), \quad \beta_2 = -\beta \sin(\Phi)$$
- 37 Eqn. (3.4.5) Two of the coefficients in the table above Eqn. (3.4.5) need to be corrected. The 1.71 coefficient for  $n = 25$  should be 1.66 and the coefficient 1.75 for  $n = 50$  should be 1.70.
- 40 line 16 These methods *are* pursued in Chapter 11.
- 75 Eqn. (4.3.24) In this equation  $\phi_1$  should be replaced by  $\phi_1/2$ .
- 89 The equation after Equation (5.1.5) has a square root missing. It should read  $\sqrt{\frac{9^t - k - 1}{9^t - 1}}$ .
- 89 Eqn. (5.1.6) The equation should read  $Y_t = Y_{t-1} + e_t$
- 104 Exercise 5.13 The data file named *airpass* should be described as international airline passenger monthly totals (in thousands) flown from January 1960 through December 1971.
- 113 Eqn. (6.2.2) The final subscript on  $Y$  in the top part of the equation should be as follows:  

$$\phi_{kk} = \text{Corr}(Y_t - \beta_1 Y_{t-1} - \beta_2 Y_{t-2} - \dots - \beta_{k-1} Y_{t-k+1}, \\ Y_{t-k} - \beta_1 Y_{t-k+1} - \beta_2 Y_{t-k+2} - \dots - \beta_{k-1} Y_{t-1})$$
- 117 Line 8 MA( $p,q$ ) should be ARMA( $p,q$ ).
- 132 Line 16 ...lag 8 of the errors should read ...lag 12 of the errors.
- 144 Exercise 6.25 In part (e), ACF should be PACF.
- 144 Exercise 6.26 In part (d), ACF should be PACF.
- 144 Exercise 6.27 In part (e), ACF should be PACF.
- 145 Exercise 6.28 Replace the Hint in parentheses by (We do not have a formula for this PACF. Instead, perform a very large sample simulation, say  $n = 1000$ , for this model and calculate and plot the sample PACF for this simulation.)
- 145 Exercise 6.28 In part (d), ACF should be PACF.
- 187 Exhibit 8.15 AIC = 217.88
- 188 Exhibit 8.16 AIC = 217.82
- 200 Eqn. (9.3.32) There is a factor of  $\theta$  missing in the last term. It should read  $\hat{Y}_t(\ell) = \mu + \phi^\ell(Y_t - \mu) - \phi^{\ell-1}\theta e_t$
- 205 The R code below Exhibit 9.2 has an extra right parenthesis at the end.
- 207 In the paragraph above Section 9.7 heading, the following changes should be made:  
 $\hat{Y}_{35}(1) = 70.14757$  and  $\hat{Y}_{35}(2) = 71.94342$ . The updated forecast is then  
 $\hat{Y}_{t+1}(1) = \hat{Y}_{36}(1) = 71.94342 + 0.5705(65 - 70.14757) = 69.00673$  or about 69.
- 213 Exercise 9.2 In parts (c) and (d), 2006 should be 2008 and, in part (d), 2007 should be 2009.
- 218 Eqn. (9.E.2) The right side should read  $\int_{-\infty}^{\infty} h(y)f(y|x)dy$ .
- 226 Eqn. (9.H.23) The variance  $\sigma_e^2$  should not appear in the RHS denominator. That is, the equation should read  

$$\sigma_e^2 = \sum_{t=1}^n \left\{ \frac{[y_t - y(t|t-1)]^2}{v_t} \right\}$$
- 226 The end of the sentence that follows Equation (9.H.24) should end with  $\sigma_e^2$  rather than  $\sigma_e$ .
- 233 line 23 The reference to Equations (10.2.2) and (10.2.3) should be replaced by (10.3.2) and (10.3.3).
- 233 footnote The reference to Equations (10.2.5), (10.2.6) and (10.2.7) should be replaced by (10.3.5), (10.3.6) and (10.3.7).
- 246 Exercise 10.5 Part (b) contains two typos. The model should read  

$$Y_t = Y_{t-1} + Y_{t-12} - Y_{t-13} + e_t - 0.5e_{t-1} - 0.5e_{t-12} + 0.25e_{t-13}$$
- 247 Exercise 10.9 The datafile name in this exercise should be *airpass*, not *airline*.
- 252 The beginning of the sentence following Eqn. (11.1.10) should read: That is,  $m_t = \omega\delta^{t-T}$  ...
- 265 Eqn (11.4.2) On the right side of the last equals sign, a left bracket ( $[$ ) is missing and a backshift ( $B$ ) is misplaced. The equation should read  

$$\hat{X}_t = X_t - X_{t-1} - \phi(X_{t-1} - X_{t-2}) = [1 - (1 + \phi)B + \phi B^2]X_t$$
- 317 Exercise 12.9 The Google returns series starts on August 20, 2004 rather than August 14, 2004.
- 348 Exercise 13.29 Replace  $Y_t = X_t - X_{t-1}$  by  $Y_t = X_t - X_{t-4}$ . (As stated, this exercise repeats Exercise 13.26.)

- 349 Exercise 13.32 The value of  $\phi_2$  should be  $-0.8$ , not  $0.8$ .
- 408 & 409 The graphs displayed in Exhibits 15.13 and 15.15 should be interchanged.
- 437 In the first paragraph the penultimate sentence should read "... the missing row dimension is set to 3."
- 442 line 7 The mode option given as `signif` should be `signf` in two places.