

## ERRATA Sheet for ATSA – Revised version (July 31, 2014)

*NOTE:* The original printing of *Applied Time Series Analysis* had several typos that have been corrected in more recent printings. While there is no indication in the front matter of the book concerning whether you have the “original” printing or the “revised” version, an easy way to check to see which version you have is the following:

On Figure 1.10, page 23:

- If the horizontal axes go from 0 to 1000 on all four plots you have the *original printing*.
- If the horizontal axes go from 0 to 100 on all four plots you have the *revised version*

### *ERRATA for Revised Version*

p. 34 – (c) Parzen window: the lower case  $m$  on the first line of the windows specification should be upper case. Also the limits for  $k$  on the first and last line should be  $|k| \leq M / 2$  and  $|k| > M$ , respectively, i.e. the left-hand side of the absolute value for  $k$  is missing.

p. 49 – Problem 1.6: The equation number (4.13) on the equation in the note should be removed.

p. 50 – Problem 1.12 should read “Show  $Y_t$  is covariance stationary and that the autocovariance of  $Y_t$  is given by .... “

p. 131 – The formula for  $\gamma_1$  should read

$$\gamma_1 = \frac{(1 - \theta_2 - \phi_1^2 \theta_2 - \phi_1 \theta_1)(\phi_1 - \theta_1) + \phi_1 \theta_2^2}{1 - \phi_1^2} \sigma_a^2$$

p. 152 – Problem 3.5. Although referring to equation (3.46) is ok, it would have been better to refer to equation (3.49).

p. 162 – Line 2 should read “and in fact,  $|\rho_k| = 1$  if  $2f_1 k$  is an integer.”

p. 168 – 8 lines from the bottom: The reference to Figure 4.7b should be to Figure 4.6b.

p. 175 – Equation (4.31) should be  $\sigma_{t|t-1}^2 = 0.1 + 0.45a_{t-1}^2 + 0.45\sigma_{t-1|t-2}^2$

p. 193 – Last line should read “was used in Figure 5.6a....”

p. 195 – Problem 5.2 is more clearly stated as : Generate and plot four realizations from the AR(4) model in Equation 5.3, page 180. Do any of these realizations have a ‘linear-trending’ behavior?

p. 236 – Equation (7.3) should read  $\rho_k = \phi_1 \rho_{k-1} + \dots + \phi_p \rho_{k-p}$

- p. 237 – On the second line following equation (7.8)  $\hat{\phi}_{YW}$  should be changed to the bold form  $\hat{\boldsymbol{\phi}}_{YW}$ .
- p. 267 – Equation on bottom line: change  $\boldsymbol{\Gamma}$  to  $\hat{\boldsymbol{\Gamma}}$
- p. 268– First equation on the page following the table: change  $\boldsymbol{\Gamma}^{-1}$  to  $\hat{\boldsymbol{\Gamma}}^{-1}$
- p. 288 – Theorem 8.1, first line should read “... that is  $\phi(B)\lambda(B)(X_t - \mu) = \theta(B)a_t, \dots$ ”
- p. 298 – 10<sup>th</sup> line after Equation (8.23):  $\Delta X_t$  should be replaced by  $\nabla X_t$
- p. 329 - Next to last line of Using GW-WINKS section should read “ $K=24$  and  $K=48$ .”
- p. 347 – Last two lines before Section 9.5 should read, “... and using linear discriminant analysis (see Johnson and Wichern, 2007) to ascertain ...”
- p. 349 - Problem 9.6: The constant in model A should be  $\alpha_0$  instead of  $a_0$ .
- p. 358 – The line following equation (10.13) should read “where  $\mathbf{a}_t = (a_{t1}, a_{t2})'$  is a bivariate white noise process.”
- p. 361 – 4<sup>th</sup> line of first full paragraph: In the equation at the beginning of the line the subscript on the first occurrence of  $\boldsymbol{\Phi}$  should be 1.
- p. 376 – 4<sup>th</sup> line after equation at top:  $\hat{\sigma}_a^2$  should be 0.0107
- p. 390 – Immediately below “*State Equation*” on second line of 10.6.7.1: Some of the quantities should be in bold type. The second line should read  $\mathbf{U}\boldsymbol{\psi}_t = \mathbf{U}\mathbf{D}\boldsymbol{\psi}_{t-1} + \mathbf{V}_t$ ,
- p. 394 – In the first line of the sequence of equations at the top of the page, the left hand side of the equal sign should be  $\boldsymbol{\Gamma}_t^{t-1}$  (i.e. the  $\boldsymbol{\Gamma}$  should be in bold type)
- p. 395 – Equation (10.A.2)” The final square bracket “]” before the comma should be a round bracket “)”
- p. 395 – There are three instances in which the symbol  $\boldsymbol{\Gamma}$  should be written in bold type:
  - immediately following the equal sign in Equation (10.A.3)
  - in the third (last) line of the sequences of equations following Equation (10.A.3) – the  $\boldsymbol{\Gamma}$  inside the parentheses
  - in the third (last) line of the sequence of equations immediately preceding Section 10.A.2 – the  $\boldsymbol{\Gamma}$  inside the parentheses
- p. 396 – 6 lines from the bottom: In the vector expression for  $\boldsymbol{\psi}_{t-1,j}$ , the  $i$  in the first row should be  $j$ .
- p. 451 – line 2 of Step 1, change “denote as  $s_{01}, s_{01}, \dots$ ” to “denote as  $s_{01}, s_{02}, \dots$ ”.

p. 487 – Figure 13.4

- a. Figure 13.4(b). The horizontal axis should be labeled “Transformed Time”
- b. Figure 13.4(d). The horizontal axis should be labeled “Frequency” and the limits should be from 0 to .5.
- c. Figure 13.4(f). The horizontal axis should be labeled “Transformed Time”

p. 488 – line 2. “  $1 - 1.6z + 0.99z^2 = 0 + 0.99z^2 = 0$  ” should be changed to “  $1 - 1.6z + 0.99z^2 = 0$  ”

p. 500 – line 11. Change “Figure 13.10e shows the Wigner-Ville” to “Figure 13.10f shows the Wigner-Ville”

p. 510 – Figure 13.6c. The horizontal axis should be labeled “Transformed Time”

References: Add

Johnson, R.A. and Wichern, D.W. (2007). *Applied Multivariate Statistical Analysis*,  
Prentice Hall: Englewood Cliffs, NJ