Below is a list of corrections/typos found so far:

- p. 26, in lemma 2.1, both \( a \) and \( b \) are assumed to be real-valued deterministic constants.
- p. 32, first line, missing transpose. The sentence should read "thus lying in the (left) null space of \( x \), i.e., \( e \in N(x^T) \)."
- p. 33, missing transposes: the vectors in Theorem 2.3 should be defined as \( z = [x^T \ y^T]^T \) and \( E\{z\} = [m_x^T \ m_y^T]^T \).
- p. 42, eq. (3.17), should read \( r_{x,y}(t_1, t_2) = r_{x,y}(t_1 - t_2, 0) \triangleq r_{x,y}(\tau) \), with \( \tau = t_1 - t_2 \).
- p. 46, eq (3.34), missing a term in the last equality, the equation should read:
  \[
  E\{r_y(k)\} = \frac{1}{N} E\{\psi_k\} = \frac{N - k}{N} (r_y(k) - V\{\hat{m}_y\}) \\
  = r_y(k) - \frac{k}{N} r_y(k) - \frac{N - k}{N} V\{\hat{m}_y\}
  \]
- p. 59, above (3.87), the variable substitution should be \( m = t - \ell \).
- p. 120, last line, wrong sign, \( \nabla \nabla y_t = (1 - c_1 z^{-1})(1 - c_1 z^{-12})e_t \).
- p. 130, just above (4.46), the text indexExample!Voiced speech should be removed.
- p. 139, eq. (4.70), should read \( w_t = A(z) \nabla x_t \).
- p. 152, missing conjugate transpose; (5.52) should read:
  \[
  X = [x_{p+1} \ldots x_N]^* 
  \]
- p. 166, typos in formula. Eq (5.15) should read
  \[
  \left[ I_{\vartheta} \right]_{k,\ell} = \left[ \frac{\partial m_{\vartheta}}{\partial \vartheta_k} \right]^T \Sigma_{\vartheta}^{-1} \left[ \frac{\partial m_{\vartheta}}{\partial \vartheta_\ell} \right] + \frac{1}{2} \text{tr} \left\{ \Sigma_{\vartheta}^{-1} \frac{\partial \Sigma_{\vartheta}}{\partial \vartheta_k} \Sigma_{\vartheta}^{-1} \frac{\partial \Sigma_{\vartheta}}{\partial \vartheta_\ell} \right\}
  \]
- p. 180, Figure 5.5(a) should appear as in Figure 1.1(a), on the next page.
Figure 1.1: Cumulative periodogram test for (a) a white noise, and (b) for an AR process, with the corresponding 1% and 5% confidence intervals.

- p. 243, the dimension of $y_t$ should be $m$, not $p$, in the equation at the top of the page, reading

$$f(Y) = \prod_{t=1}^{N} [(2\pi)^m \det(\Sigma)]^{-1/2} \exp\left\{-\frac{1}{2} [y_t - X\theta]^T \Sigma^{-1} [y_t - X\theta]\right\}$$

$$= [(2\pi)^m \det(\Sigma)]^{-N/2} \exp\left\{-\frac{1}{2} \sum_{t=1}^{N} [y_t - X\theta]^T \Sigma^{-1} [y_t - X\theta]\right\}$$

- p. 253, Problem 7.1, §$E\{\hat{\Sigma}_y\}$ should read $E\{\hat{\Sigma}_y\}$.

- p. 254, Table 7.5, p in the first column should be ordered from 1 to 5, not 0 to 4. The same in table D.4 in the solution on p. 341.

- p. 268, example 8.4. There are errors in this example; it will be removed.

- p. 280, eq (8.148), the last time indices are missing. It should read:

$$\hat{y}_{t+k|t} = C\hat{x}_{t+k|t} = CA^k\hat{x}_{t|t}$$

- p. 289, line 2, the size of $A$ should be $A \in \mathbb{C}^{m \times m}$.

- p. 303, solution 3.1, missing minus sign. In the second and third line, it should read $\omega_0(t - k)$ and $-\omega_0k$, respectively.

- p. 314, solution 3.14, sign error. The first equation should read:

$$r_z(\tau) = C\{x_t + y_t, x_{t-\tau} + y_{t-\tau}\} = r_x(\tau) + r_y(\tau)$$

- p. 317, solution 4.4, sign error. The second equation should read:

$$r_y(\tau) = E\left\{\left(\begin{array}{c} x_{t-S} \\
 x_{t-\tau-S}
\end{array}\right) \left(\begin{array}{c} x_{t-\tau} \\
 x_{t-\tau-S}
\end{array}\right)\right\}$$

$$= 2r_x(\tau) - r_x(\tau + S) - r_x(\tau - S)$$
• p. 328, solution 5.9, missing square in fourth equation. It should read:

\[ r_y(0) = \frac{b_0^2 \lambda^2}{1 - a_0^2} + \frac{1 + c_0^2 - 2a_0c_0}{1 - a_0^2} \sigma^2 \]

• p. 341, solution 8.2. The state equation should read:

\[
\mathbf{x}_{t+1} = \begin{bmatrix}
-1 & -2 & 1 & 0 \\
-3 & -4 & 0 & 1 \\
-5 & -6 & 0 & 0 \\
-7 & -8 & 0 & 0
\end{bmatrix} \mathbf{x}_t + \begin{bmatrix}
8 & 8 \\
8 & 8 \\
8 & 8 \\
8 & 8
\end{bmatrix} \mathbf{e}_t
\]

It is worth noting that the example is poorly chosen as the AR-polynomial is unstable.