# Errata

### Notation

- Infinite unions and intersections should be defined as

$$\bigcup_{i=1}^{\infty} A_i \stackrel{\text{def}}{=} \{x : x \in A_i, \exists i\} \qquad \text{and} \qquad \bigcap_{i=1}^{\infty} A_i \stackrel{\text{def}}{=} \{x : x \in A_i, \forall i\}.$$

### Chapter 1

- In Problem 9, in the equation defining $K_1$, $[0.1/3]$ should be $[0, 1/3]$.

### Chapter 2

- Problem 13/14 should have a single number.

### Chapter 8

- Page 135: On line 7, $h_t(X)$ should be $h_t(X_n)$; on line 15, $\alpha$ should be $t$; and the expression on line 18 equals 0.
- In the next to last line of Problem 35, $X_{m_n}$ should be $X_{M_n}$.

### Chapter 9

- On the last line of page 165, $\hat{\theta}^2 - 2\hat{\theta}\theta + \hat{\theta}^2$ should be $\hat{\theta}^2 - 2\hat{\theta}\theta + \theta^2$.
- In Problem 5, "maximum likelihood estimation!inconsistent example" should be deleted, and the empty Problem 4 should be deleted.
- In the displayed equation in Problem 40, "$g(x)$" should be "$g(X_0)$".

### Chapter 12

- In Problem 30b, the functions are increasing for $x \in [0, \infty)$.

### Chapter 17

- In Section 2, $o_p(\nabla l_n(\tilde{\theta}_n)$, $o_p(Y_n)$, $o_p(\check{Y})$, $o_p(\check{Y}_1)$, or $o_p(\check{Y}_2)$ should be $o_p\big(\|\nabla l_n(\tilde{\theta}_n\|\big)$, $o_p\big(\|Y_n\|\big)$, $o_p\big(\|\check{Y}\|\big)$, $o_p\big(\|\check{Y}_1\|\big)$, or $o_p\big(\|\check{Y}_2\|\big)$, respectively. These errors occur in (17.9), (17.10), lines 10, $-4$, $-2$ and $-1$ on page 351, (17.17), and (17.18).
- In the equation before (17.19), $(Z_n - Y_n)$ immediately after the equal sign should be $(Z_n - Y_n)'$.
- In (17.19) and the equation before, $o_p\big(\|Y_n\|\big)$ and $o_p\big(\|\check{Y}\|\big)$ should be $o_p\big(\|Y_n\|^2\big)$ and $o_p\big(\|\check{Y}\|^2\big)$.
- On page 360, line 14, the first "1/4" should be 1/16.
- In Problem 6, $\lambda$ and $D$ are equivalent when $D > 0$ (or $\lambda > 1$).

### Chapter 20

- In Problem 5, $Q_\theta^n$ should be $Q_\theta^k$.

**Appendix**

- In A.4, page 437, $h^{-1}$ should be $h^{\leftarrow}$ on lines 9 and 10.

**Solutions**

- In B.10, Problem 4, $(c - X)$ should be $(c - X)^+$.
- In B.12, Problem 25a, "increasing" should be "nondecreasing".