

## Corrections

1. Chapter 3, page 79, line 13 from below : In the definition of  $h^+$  and  $h^-$ ,  $x$  should be replaced by  $u$ .

2. On page 199, line 2 : *third trial* should be *third tail*.

3. The following paper is referred to in page 302 but is not included in the list of references.

Muller, P., Erkanli, A. and West, M. (1996). Bayesian curve fitting using multivariate normal mixtures. *Biometrika* **83**, 67-79.

4. On page 308 (Appendix B), before the statement of the weak sufficiency principle (WSP), we add the following:

“For simplicity we assume a countable sample space and the existence of a countable subset  $\Theta' = \{\theta_1, \theta_2, \dots\}$  of  $\Theta$  such that for every  $x$ , there exists a  $\theta_i$  satisfying  $p(x|\theta_i) > 0$ .”

Also, the four lines following the statement of WSP should be replaced by “It follows that SP implies WSP, which can be seen by noting that

$$S(x) = \left\{ \frac{p(x|\theta)}{\sum_{\theta_i \in \Theta'} p(x|\theta_i)/2^i}, \theta \in \Theta \right\}$$

is a (minimal) sufficient statistic.”

5. **Section 9.4** (pp. 264-268).

**proof of Stein’s Identity.** To keep presentation simple, we have used integration by parts in its standard form. This requires the condition  $\phi(x) \exp\{-(x - \mu)^2/2\sigma^2\} \rightarrow 0$  as  $|x| \rightarrow \infty$ . Stein’s original proof (see Stein (1981, Ann. Statist. pp.1136-37)) assumes only  $E|\phi'(X)| < \infty$  and shows that the integration by parts formula used by us holds without any further

condition. It may be noted that it is enough to assume  $\phi$  is differentiable almost everywhere.

**Corollary** in page 266.

The result holds if for almost all  $(x_1, \dots, x_{j-1}, x_{j+1}, \dots, x_p)$ ,  $\phi_j(x_1, \dots, x_{j-1}, x_j, x_{j+1}, \dots, x_p)$ , as a function of  $x_j$  is an indefinite integral of the function  $\frac{\partial \phi_j}{\partial x_j}$  (where  $\frac{\partial \phi_j}{\partial x_j}$  exists for almost every  $x_j$ ).

The result is thus applicable for the functions given by (9.43) and (9.44).

p.266, 3rd line in the corollary : LHS should be

$$\phi_j(x_1, \dots, x_{j-1}, x, x_{j+1}, \dots, x_p) - \phi_j(x_1, \dots, x_{j-1}, a, x_{j+1}, \dots, x_p)$$

p.266, (9.37) : In the LHS,  $\sigma^2$  should be replaced by  $\sigma^2/n$ .

p.267, (9.43), 2nd line :  $\frac{1}{2}(p-2)$  should be  $\frac{1}{2}((p-2)$

p.267, line 10 :  $\text{grad}(\log \phi)$  should be replaced by

$$\tilde{\mu} = \bar{X} + (\sigma^2/n) \text{grad}(\log \phi(\bar{X})).$$

p.267, (9.44) :  $\phi(x) = \|x\|^{-(p-2)}$  (NOT  $\phi(x) = \|x\|^{(p-2)}$ )