

Errata

Spatial Point Patterns: Methodology and Applications with R

Baddeley, Rubak and Turner (2015)

Last updated February 25, 2023

1. Page 67, line 3 from bottom: In recent versions of the software, `package="spatstat"` needs to be replaced by `package="spatstat.data"`.
2. Page 68, line 4: likewise.
3. Page 68, line 6 from bottom: likewise.
4. Page 115, line 4 from bottom: the code should read

```
> Y <- eval.im(Z + 10)
```

5. Page 151. Reference to Bartlett [83] should be Bartlett (1964) as listed below. (Also on pages 159, 189 and 210).
6. Page 159. Reference to [83] should be Bartlett (1964) as listed below.
7. Page 169, equation (6.9), the edge correction that we called “Diggle’s correction” was first proposed by Jones (1993) and should be called the “Jones-Diggle correction”. See also Diggle (2010), equation (18.9).
 - Diggle, P.J. (2010) Nonparametric methods. Chapter 18, pp. 299–316 in A.E. Gelfand, P.J. Diggle, M. Fuentes and P. Guttorp (eds.) *Handbook of Spatial Statistics*, CRC Press.
 - Jones, M.C. (1993) Simple boundary corrections for kernel density estimation. *Statistics and Computing* **3**, 135–146.
8. Page 189. Reference to [83] should be Bartlett (1964) as listed below.
9. Page 191, line 14: website `statscan.org` should read `satscan.org`
10. Page 210. Reference to [83] should be Bartlett (1964) as listed below.
11. Page 229, equation (7.30), the right hand side should be multiplied by $|W|/(n(n-1))$, so that the equation reads

$$\hat{g}(r) = \frac{|W|}{2\pi n(n-1)} \sum_{i=1}^n \sum_{\substack{j=1 \\ j \neq i}}^n \frac{\kappa_h(r - d_{ij})}{d_{ij}} e_{ij}(r)$$

12. Page 261, line 2 of text: `tile.index` should be `tileindex`.
13. Page 308, Figure 9.3 caption: in the caption for the right panel, the name `code` should be `fit`.
14. Page 325, line 6–7 from bottom: the estimates of the coefficients in (9.27) are $\mu = -6.0184$, $\beta = -0.2047$, $\alpha_{\text{FALSE}} = 0$, $\alpha_{\text{TRUE}} = 2.0013$, $\gamma_{\text{FALSE}} = 0$ and $\gamma_{\text{TRUE}} = 0.1674$.

15. Page 344, lines 6–7: $\boldsymbol{\theta}$ and $\mathbf{Z}(u)$ should be column vectors.
16. Page 374, in equation (10.3), $\mathbf{I}_{\boldsymbol{\theta}}$ should be $\mathbf{I}_{\boldsymbol{\theta}_0}$.
17. Page 365: Code for local likelihood is in a separate package `spatstat.local`.
18. Page 376, third displayed equation should read

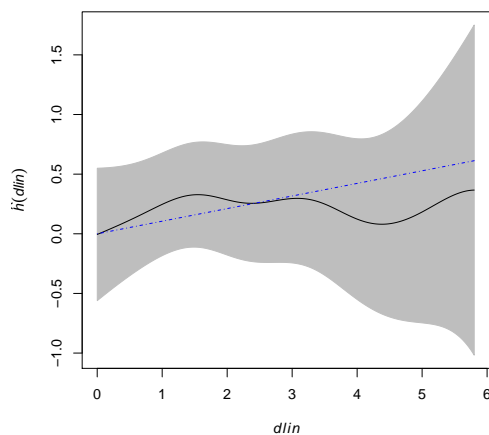
$$Z_2 = \sqrt{\frac{12}{n}} \left(\sum_i u_i - \frac{n}{2} \right).$$

19. Page 480: Code for locally fitted Cox and cluster process models is provided in a separate package `spatstat.local`. The relevant functions are `loccit` and `locmincon` instead of `lockppm`.
20. Page 485, line 8: “stationary point” should be “stationary point process”
21. Page 521, line 7: the fraction of contested area is $-C(u, \mathbf{x})$, not $C(u, \mathbf{x})$.
22. Page 522, equation (13.36): the first product symbol should be deleted; the correct equation is

$$\lambda(u \mid \mathbf{x}) = \beta \gamma^{\min(s,t(u,r,\mathbf{x}))} \prod_{i=1}^{n(\mathbf{x})} \gamma^{\min(s,t(x_i,r,\mathbf{x} \cup \{u\})) - \min(s,t(x_i,r,\mathbf{x}))}.$$

In the text below this equation, the reference to the “first product” and “second product” in (13.36) should be “the terms outside the product” and “the product”, respectively.

23. Page 535: `temper` should be `rtemper`.
24. Page 542: Figure 13.33 is incorrect; the correct figure is shown below. The figure in the book was produced by `parres(copfit, dlin)` (as stated correctly in the text) but this should have been `parres(copfit, "dlin")`.



25. Page 544: A term has been omitted in equations (13.55) and (13.57). The right hand side of (13.55) should include the additional term

$$+ \sum_{i=1}^n [\mathbf{Z}(x_i | \mathbf{x} \cup \{u\}) - \mathbf{Z}(x_i | \mathbf{x})]$$

and the right hand side of (13.57) should include

$$+ \sum_{j=1}^n [\mathbf{Z}(x_j | \mathbf{x}) - \mathbf{Z}(x_j | \mathbf{x} \setminus \{x_i\})].$$

26. Page 546: Code for local likelihood is in a separate package `spatstat.local`.
27. Page 578, line 5: `plot(ProbU)` should be `plot(ProbD)`.
28. Page 786, reference [643]: volume number is **62**.
29. The new package `local` for local likelihood, mentioned in Sections 9.13, 12.5 and 13.11, has been renamed `spatstat.local`. It is available on CRAN.

References

Bartlett, M.S. (1964) The spectral analysis of two-dimensional point processes. *Biometrika* **51** (1964) 299–311.

Acknowledgements

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