

Errata
*Understanding and Implementing the Finite
Element Method*

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(SIAM 2006)

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Note: Positive line numbers start at the top of the page, negative line numbers start at the bottom.

1. Page 90, Line -1: The integral on the right-hand side is missing a factor of $|\det(J(u))|$. The equation should read

$$\int_Q \kappa(z) \nabla \phi_i(z) \cdot \nabla \phi_j(z) dz = \int_{S_R} \kappa(F(u)) (J(u)^{-T} \nabla \gamma_i(u)) \cdot (J(u)^{-T} \nabla \gamma_j(u)) |\det(J(u))| du.$$

2. Page 167, Algorithm 7.1:
 - Line 10: `T.Edges(eptr(2,2))` should be `T.Edges(eptr(2),2)`
 - Line 12: `T.Edges(eptr(2,1))` should be `T.Edges(eptr(2),1)`
3. Page 172, Algorithm 7.5:
 - Line 10: `nonzero` should be `negative`
4. Page 225, Chapter 10: This chapter fails to give any suggestions for further reading about direct methods for sparse systems. An up-to-date treatment that just appeared is *Direct Methods for Sparse Linear Systems* by Timothy A. Davis (SIAM, 2006).
5. Page 334, Section 15.2: The explicit residual indicator described in this section is due to Ainsworth and Oden (see Section 2.2 of *A Posteriori Error Estimation in Finite Element Analysis* by Mark Ainsworth and J. Tinsley Oden, reference [2] in the bibliography). The citation was inadvertently omitted.
6. Page 338, Line -4: “three-point element residual estimator” should be “explicit residual estimator.”