

Essential Partial Differential Equations, Analytical and Computational Aspects

Errata

David F. Griffiths, John W. Dold and David J. Silvester

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Page 6 Line 2. The final expression for u_{xx} should read $u_{xx} = -\frac{1}{2t}u(x, t) + \frac{x^2}{2t}u(x, t)$.

Page 9 Exercise 1.8(b). $u(x, t)$ is constant along the lines $x + (b - a)t = \text{constant}$.

Page 36 For v , read \vec{v} .

Page 54 Exercise 4.8. The second initial condition should read $u_y(x, 0) = g_1(x)$.

Page 113 Exercise 6.12. $\rho = (\varepsilon + h)/(\varepsilon - h)$.

Page 117/8 Exercise 6.39 should be starred as difficult and not Exercise 6.38.

Page 190 Exercise 9.13. The initial conditions should read $u(x, 0) \equiv 0$, $u_t(x, 0) \equiv 0$.

Page 192 Exercise 9.18. $t \rightarrow \ln \sigma / (1 + \sigma)$.

Page 231 The quantity in Exercise 10.7 should be $4(U_P^h - U_P^{h/2})/3$.

Page 234 Exercise 10.22. In the final paragraph, $v = (x - x_{\ell-1})(x - x_\ell)(x - x_{\ell+1})$ and not u .

Page 232 For Δ_x , read \triangle_x .

Page 273 The displayed equation should read $U_m^{n+1} = U_m^n + \frac{k}{h^2} r_m^{-1} \delta_r(r_m \delta_r U_m^n)$.

Page 312 The second sentence should begin: “Show that $\xi_F \xi_B^* = 1$ and ...”.

Page 324 Line 11, κ, κ_2 should read κ_1, κ_2 .

Page 329 Project 13.10, part (b). This refers to the local truncation error of the Du Fort–Frankel method.

Page 331 Project 13.13, line 1 should read $u(x, t) = e^{i\lambda t}$.

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