Errata: Introduction to Scientific Computing, 2nd Ed.

p. xi URL scrambled
p. 5 first display: stray backslashes
p. 8 2nd display from foot: 2*pi* missing inside sin
p. 33 l. 16 insert “a” between “write” and “second”.

The formula giving the form of τ illustrating relative error is meaningless. Given d, a g can always be found for which the condition holds. (Some characterization like g=ceil(log2(x)) is needed.)

p. 41 The formula giving the form of τ illustrating relative error is meaningless. Given d, a g can always be found for which the condition holds. (Some characterization like g=ceil(log2(x)) is needed.)

p. 42 In script ExpTaylor l. -7: for k=1:nTerms
p. 43 Last display: x2 should be x2.

p. 47 First sentence of P1.4.5 ends with a question mark.

p. 53 l. -2 Replace “off” by “of”.

p. 60 l. 8 Case error: C1.long.d, not C1.Long.d
p. 61 3rd line in spec for Convert: x is the value of f.

p. 62 2nd line in spec for Pretty: extra “is a”.

p. 63 Comments in PadeCoeff: replace square brackets by parens.

p. 64 In P1.6.2 replace “approximates” by “approximants.”

p. 69 Color mnemonics for white, magenta, and black are w, m, and k resp.

p. 79 l. 2 of script: Replace InverpV by InterpV.

p. 81 l. 2 Replace pval by pVal.

p. 84 l. -5 Divide equations 2, 3, and 4 by (x2−x1), (x3−x1), and (x4−x1), respectively.

p. 171 Last display: ci−j should be ci−j+1.

p. 172 End of first paragraph: Each “×” designates a scalar that can be nonzero.

p. 173 l. 1 Replace “reference” by “refer.”

p. 173 last displayed equation: T(4,5) = −1.

p. 175 l. 1 should be A = [1 zeros(1,4); ... The discussion that follows about “extraction of blocks” requires a matrix with at least 6 columns; it is not feasible with the displayed matrix A.

p. 177 l. 4: Ax not Az.

p. 179 A(5,:) looks like [0000 ×××].

p. 188 The table F of function values set up (three ways) on this page has x running down the rows and y across the columns. This is contrary to the convention used in MATLAB’s plot commands like contour.

p. 189 In SampleF the comments say that the function being sampled is exp(−(x2+3y2)), but the code and text following say exp(−(x2+2y2)/4).

p. 192 M-file SampleF2 actually evaluates (instead of the integrand displayed)

\[
\frac{1}{((x -.3)^2 + .1)((y -.4)^2 + .1)} + \frac{1}{((x -.7)^2 + .2)((y -.3)^2 + .2)} - 6.
\]

p. 194 l. 22: The required function [A,b]=Poisson(m,n) presumably returns the matrix A and right-side vector b, not the solution of the system, to judge by the calling sequence. (And since there are no sources or sinks of heat, isn’t this a Laplace equation?) The code for fnorth needs a “.”.
The comments in function files MatVecRO.m and MatVecCO.m are identical, although they correctly describe only the latter’s operation.

210 l.-5: ... so we can vectorize as follows (assuming that x is a column vector):

in the third line replace X by x.

235 The proof of Theorem 6 repeatedly uses the fact that \( \|Mx\| \leq \|M\|\|x\| \). However, this property of norms has not been stated previously.

246 **P7.1.2:** Stray backslashes, and “\$car$” should be “\$”.

256 In the second-to-last display (matrix \( T \)) the entries \( e_n \) should be \( e_n \).

258 First comment line in function M-file should read “\([g,h]\) =” instead of “\(G\) =”.

274 Function **MakeScalar** is missing from the list.

289 **P8.1.12** l. 3 Replace \( 1/(x - x_c) \) by \( 1/(x - x_c) \), and \( R_c(x_c) \) by \( R_c(x_c) \).

294 l.-4 Replace “less” by “fewer”.

304 In **P8.2.2**, write parametric equations for the ellipse in the usual way. Then *any* triangle with vertices \( P(t), P(t + \pi/3) \) and \( P(t + 2\pi/3) \) has maximal area. This can be deduced from the fact that the tangent to the ellipse at any vertex of a maximizing triangle is parallel to the opposite edge.

305 In **P8.2.7**, third display, the vector on the right should be

\[
\begin{bmatrix}
 bx(t)/a \\
 ay(t)/b
\end{bmatrix}
\]

315 In the code for **JSepV** the last line is missing:

\[
J = [ \text{Rot1}*[\text{beta1}*s1;-\text{gamma1}*c1] \text{Rot2}*[\text{-beta2}*s2;\text{gamma2}*c2]]
\]

336 l.-2 before §9.1.4: \( F(z) = z - h_n f(t_{n+1}, z) - y_n \).

339, third display from the foot. The middle equation is \( 2b\alpha = 1 \). The following sentence should read, “\( a = b = 1/2 \) and \( \alpha = \beta = 1 \).”

340 The second line following “**elseif** \( k==2\)” should read

\[
k2 = h*feval(fname,tc+h,yc+k1);
\]

as it does in the script **RKStep** supplied with the text, and corresponding to the last display but one on page 339.

344 l. 8: stray tt.

363 col. 1 l.-8: **cell**, 60 instead of **cell**, 160.