Errata for “Computational Physics” 2nd Edition by Giordano and Nakanishi

Where	Incorrect	Correct
p.23, in the caption for Fig.2.2	The drag coefficient was 0.5.	The drag coefficient was 1.
p.27, bottom 2 lines	$F_{drag,x} = -(B_2/m)vv_{x,i}, F_{drag,y} = -(B_2/m)vv_{y,i}$	$F_{drag,x} = -B_2 vv_{x,i}, F_{drag,y} = -B_2 vv_{y,i}$
p.45, 7th line	$C \approx 1/2$	$C \approx 1$
p.45, lines 8 and 12	$7.0/v$	$14.0/v$
p.45, 12th & last lines, p.46, line 2 in Ex.2.24	$C = 1/2$	$C = 1$
p.45, Eq.(2.34)	$F_{drag} = -C\rho A v^2$	$F_{drag} = -(1/2)C\rho A v^2$
p.48, just before Eq.(3.1)	The parallel forces add to zero since we assume that the string ... break,	The net parallel force provides the centripetal acceleration to keep the pendulum motion in a circular arc,
p.49, 4th line from top	... the string	... the string and θ is measured in radians
p.58, line 3 of Example 3.3	$-[(g/l)\sin\theta_i$ ...	$+[-(g/l)\sin\theta_i$ ...
p.98, last row of Table 4.1	$\sim 6.0\times10^{24}$	1.3×10^{22}
p.125, just below Eq.(4.25)	$I = m_1\|r_1\|^2 + m_2\|r_2\|^2$ is the moment of inertia	$I = m_1 d_1^2 + m_2 d_2^2$ is the moment of inertia and d_1 and d_2 are distances measured from the center of mass of the two particles to each particle
p.131, line 6 from top and paragraph 2 line 5	Fig. 12.47	Fig. 5.1
p.138, paragraph 3 line 2	Fig. 12.47	Fig. 5.1
p.157, Eq.(6.4)	ρ on the extreme right	μ
p.193, lines 3 and 10	Table 7.3	Table 7.1
p.194, in Eq.(7.11)	$=$	$\propto$
p.196, in Eq.(7.20)	$\ldots=\ldots$	$\ldots=D\ldots$ (i.e., insert D to right of “=”)
p.220, within 4th bullet of Example 7.4	Text in 2nd tertiary (dot) bullet	This text should have appeared in a box.
p.221, just above Example 7.5	...the box in Example 7.8	...the box in Example 7.4
p.225, just after Example 7.6	in Example 7.3	in Example 7.2
p.229, 4th line from bottom	consequence effect	consequence
p.265, just below Eq.(8.32)	$t \equiv 1 - zJ/k_B T = (T - T_C)/T_C$	$t \equiv 1 - zJ/k_B T \cong (T - T_C)/T_C$
p.274, 3rd line from bottom	1.8×10^{-12} s	2.2×10^{-12} s
p.277, last line of paragraph 1.	for sin $\theta_{k,j}$	(delete)

p.280, in Eq.(9.9)	$v^2 / k_B T$	$v / k_B T$
p.296, in Eq.(9.17) (two places)	$1/(\Delta t)^2, \beta/(\Delta t)^2$	$(\Delta t)^2, \beta(\Delta t)^2$
p.311, 2nd bullet in Example 10.1	$\psi_0 = \psi_{-1} = 0$	$\psi_0 = \psi_{-1} = 1$
p.317, in caption for Fig. 10.8	for E = –1.969 the derivatives match fairly well, so this is an acceptable approximation ...	for E = –1.969 the derivatives match better. The best match for this case is obtained for about E=–1.890; so that is an acceptable approximation ...
p.327, in 3rd line	(10.17)	(10.18)
p.335, in Eq.(10.41)	$-(\Delta t)V(x)I(x, t+\Delta t/2)$	$+(\Delta t)V(x)I(x, t+\Delta t/2)$
p.339, in 3rd sentence of caption for Fig. 10.17	…*x=1.*	…*x=1* in the Crank-Nicholson method.
p.345, in Eq.(10.56), last line	$\ldots + R(x, y+\Delta x, t) + \ldots$	$\ldots + R(x, y+\Delta y, t) + \ldots$
p.384, in 2nd line of Eq.(11.31)	$p(i, n+1) = p(i, n-1) - \ldots$	$p(i, n+1) = p(i, n) - \ldots$
p.440, in 2nd line of Eq.(12.23)	$e^{-V/20}$	$e^{-V/80}$
p.460, in caption of Fig.A.2	$\Delta t = 1$ and $\tau = 0.5$	$\Delta t = 0.5$ and $\tau = 1$
p.472, 5th line in B.2	$x_1 < x_2 < x_3$	$x_a < x_b < x_c$
p.472, 3rd bullet in Example B.1	$g(x_0) \le g(x_1)$	$g(x_0) \ge g(x_1)$
p.480, end of line 1 to beginning of line 2	sines of cosines	sines and cosines
p.484, line 8	can seen … (C.3)	can be seen … (C.6)
p.484, line 10	$m = 0, 2, \ldots, 7$	$m = 0, 1, \ldots, 7$
p.486, in footnote 7	(hertz) Hz	hertz (Hz)
p.488, line 2	Figure A2.4	Fig. C.4
p.490, in Eq.(C.13)	$d\tau$	dt
p.490, in Eq.(C.14)	$\int_{-\infty}^{\infty} \ldots d\tau$	$\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \ldots dt\, d\tau$
p.498, 2nd line after Eq.(D.18)	(??)	(D.18)
p.502, in Eq.(E.9)	$\sum_{i=1}^{n-1} f(x_i) + \frac{1}{2}[f(a) + f(b)]$	$\sum_{i=1}^{n-1} f(x_i)\Delta x + \frac{1}{2}[f(a) + f(b)]\Delta x$
p.510, line 8	$N^{1-3/d}$, $N^{1-5/d}$	$N^{-2/d}$, $N^{-4/d}$
p.510, line 10-12	Simpson's … of no use in two, three, and five dimensions … In fact, … d = 4 dimensions.	Simpson's … less competitive than Monte Carlo integration in three, five, and nine dimensions.
p.518, in Eq.(F.4)	$exp[(y-y_c)^2/\sigma^2]$	$exp[-(y-y_c)^2/\sigma^2]$

p.527, line 5	was also be	can also be
p.528, in Eq.(H.4)	$\ldots + a_{1N} x_1 = b_1$	$\ldots + a_{1N} x_N = b_1$
p.528, in Eq.(H.5)	$\ldots + a_{2N} x_2 = b_2$	$\ldots + a_{2N} x_N = b_2$
p.534, just after Eq.(H.27)	$\boldsymbol{A} \cdot \boldsymbol{x} = \boldsymbol{f}$	$\boldsymbol{A} \cdot \boldsymbol{x} = \boldsymbol{b}$
p.534, just after Eq.(H.30)	$\mathbf{E}^{(n)}$	$\mathbf{E}^{n}$