Corrections to *Digital Signal Processing, 4th Edition*

by

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1. Page 18, two lines below equation (1.3.18)

   sk(n) should be $s_k(n)$

2. Page 34, Figure 1.4.8

   The quantized value of the signal between 2T and 3T should be 4

3. Page 66, line below equation (2.2.43)

   "is relaxed" should be "is non-relaxed"

4. Page 101, last term of equation (2.4.24)

   $\sum_{n}^{n}$ should be $\sum_{N}$

5. Page 147, last sentence above Section 3.1

   Move this sentence to line above, just before the word "Finally, "

6. Page 161, figure 5.2.1

   The mapping is $w = a^{-1}z$

7. Page 237, line 2 from the top of page

   "radian" should be "radial"

8. Page 321, Figure 5.2.3, magnitude plot

   Scale on the ordinate should be multiplied by 5

9. Page 387, line 8 below equation (6.1.15)

   $X(F_s)$ should be $X(F)$

10. Page 390, Figure 6.1.3(b)

    $X(F/F_s)$ should be $X(F)$

11. Page 391, Figure 6.1.5 upper right-hand part of the figure

    $X(F/X_f)$ should be $X(F)$

12. Page 396, Figure 6.2.3, graph of Y(F)

    For $F<0$, the F_s on the abscissa should be $-F_s$

13. Page 424, two lines below equation (6.4.68)

    The word "envelop" should be "envelope"

14. Page 454, equation on line above Section 7.1.2

    $e^{-j2\ kN}$ should be $e^{-j2\ k/N}$

15. Page 463, line below equation (7.1.39)

    (7.1.38) should be (7.1.39)

16. Page 506, problem 7.23(e)

    The exponent should be $j(2\ /N)\ k_o n$

17. Page 526, Figure 8.1.10

    Delete the factor of 2 in the expression for B

18. Page 582, line 4 from the top

    $B_2(z) = 1/2+3/8\ z^{-1}+z^{-2}$

19. Page 646, Problem 9.22

In the denominator of H(z), the term r2 should be r^2

20. Page 672, two lines below equation (10.2.35)

G(k+x) should be ((k+)

21. Page 679, line above equation (10.2.52) and in equation (10.2.52)

Add the term

$\tilde{b}(1) = 2b(1) - 2\,b(0)$; Then, in (10.2.52), k = 2,3,…,M/2 -2

22. Page 680, line above Case 4:

The equation should be

$$\tilde{c}(0) - \tfrac{1}{2}\,\tilde{c}(2) = c(1)$$

23. Page 725, Figure 10.3.14, graph on left

The value of 1 is the peak value

24. Page 742, problem 10.2.3, lines 4 and 6

Add subscripts l and u on the expressions for

H(s) should b $H_a(s)$

25. Page 809, equation (11.12.15)

$\mathbf{Q}(z^M)$ should be $\mathbf{Q}^t(z^M)$

26. Page 811, in Solution of example 11.12.1

The matrix for $G_0(z)$, $G_1(z)$ and $G_2(z)$ should be transposed

Thus,

$G_0(z) = 1-z^{-1} + z^{-2}$, $G_1(z) = -1-z^{-1}+3z^{-2}$, $G_2(z)=1+3z^{-1}-5z^{-2}$

27. Page 818, problem 11.16

Change the statement of the problem to the following:

Use the result in Problem 11.15 to determine the type II form of the I=3 interpolator in Figure 11.5.12(b)

28. Page 821, third line from bottom of page

Should be $f_0 = 1/6$ and $f = 1/3$

29. Page 958, problem 13.19

In the expression for the least squares error,
f(m)n should be $f_m(l)$ and gm(n) should be $g_m(l)$

30. Page 962, equations (14.1.6), (14.1.7) and (14.1.8)

X(F/X(F)) should be X(F)

31. Page 964, in Solution of Example 14.1.1, line 2

Figure 10.2.2(a) should be Figure 10.2.2

32. Page 1038, problem 14.35

In the denominator of the equation, $\mathbf{v}_k\mathbf{v}_k$ should be $\mathbf{v}_k\mathbf{v}_k^H$