

Chapter 1

No errors identified.

Chapter 2

1. Page 37, fourth line below Eq. (2.25) – There should be an ‘r’ subscript on the complex relative permittivity term. The sentence should read “...the relative permittivity becomes complex $\tilde{\epsilon}_r$.”
2. Page 37, first line above Eq. (2.27) – There should be an ‘r’ subscript on the complex relative permittivity term. The sentence should read “The complex relative permittivity $\tilde{\epsilon}_r$...”
3. Page 37, second line below Eq. (2.29) – There should be an ‘r’ subscript on the complex relative permeability term. The sentence should read “...also a complex number $\tilde{\mu}_r$.”
4. Page 38 and 39, Eqs. (2.34), (2.36) and (2.38) – There should not be an ‘r’ subscript on the permittivity terms because it is not the relative permittivity being described here. That is, each occurrence of $[\epsilon_r]$ should be written as $[\epsilon]$.
5. Page 38 and 39, Eqs. (2.35), (2.37) and (2.39) – There should not be an ‘r’ subscript on the permeability terms because it is not the relative permeability being described here. That is, each occurrence of $[\mu_r]$ should be written as $[\mu]$.
6. Page 39, third line below Eq. (2.37) -- There should not be an ‘r’ subscript on the permittivity term. The sentence should read as “...in the tensor $[\epsilon]$ is interpreted...”
7. Page 39, fifth line below Eq. (2.37) -- There should not be an ‘r’ subscript on the permeability term. The sentence should read as “...in the tensor $[\mu]$ is interpreted...”
8. Page 48, Figure 2.3 – In the caption associated with elliptical polarization in part (d) of figure, the acronym for “elliptical polarization” is incorrectly written as LP. It should be written as EP.
9. Page 51, Equation (2.90) – The correct equation for \hat{a}_{TM} is $\hat{a}_{TM} = \frac{\vec{k}_{inc} \times \hat{a}_{TE}}{|\vec{k}_{inc} \times \hat{a}_{TE}|}$.
10. Page 51, line immediately above Eq. (2.91) – The variable P_{TE} should be p_{TE} and the variable P_{TM} should be p_{TM} . The Ps should be lower-case to be consistent with the same variables in Eq. (2.91).
11. Page 54, last line in caption for Figure 2.5 – The “a” should not appear in this line.
12. Page 58, Equation (2.125) – The \hat{a}_y unit vector should be \hat{a}_z .
13. Page 58, paragraph just above Eq. (2.126) – The inline equation $K = \left(\frac{2\pi}{\Lambda}\right) \hat{a}_x$ should be $\vec{K} = (2\pi/\Lambda)\hat{a}_x$.
14. Page 58, Equation (2.126) – The \hat{a}_y unit vector should be \hat{a}_z .
15. Page 60, first line after Eq. (2.133) – The inline equation should be $|\vec{E}_{0,inc}| = 1$.
16. Page 61, Figure 2.7 – All sense of x and y should be reversed so that the coordinate system is right-handed.
17. Page 67, Equation (2.158) – The equation needs a square root on the rightmost expression to read $\gamma = \alpha + j\beta = \sqrt{(R + j\omega L)(G + j\omega C)}$.
18. Page 68, Figure 2.10 – The scale factor should be $s = d_2/d_1$.

Chapter 3

1. Page 74, first line after Eq. (3.7) – The mathematical expression $f(x)$ should be $f(x)$. The parentheses should not be italicized.
2. Page 75, last sentence in paragraph immediately after Eq. (3.10) – The sentence should read as “A finite-difference approximation derived from n points is said to be n th-order accurate.”
3. Page 78, first line in Section 3.2.3 – The sentence should start as “All of the finite-difference approximations...”
4. Page 79, second line after Eq. (3.36) – The sentence should end as “...the function at $n = 1.5$.”
5. Page 80, third line after Eq. (3.44) – The sentence should be “Four points were used to estimate the derivative so this is a fourth-order accurate finite-difference approximation.”
6. Page 90, Eq. (3.66) – This is subtle but the Greek letter nu in ‘ $\nu(n)$ ’ should be replaced with Arabic vee ‘ $v(n)$ ’

Chapter 4

1. Page 96, sixth line below Eq. (4.6) – Equation range should be (4.2) to (4.6).
2. Page 96, ninth line below Eq. (4.6) – The sentence should read as “Furthermore, ϵ_{xx} will be defined at the same points as E_x , ϵ_{yy} will be defined at the same points as E_y , and ϵ_{zz} will be defined at the same points as E_z .”
3. Page 99, last line on page – There should not be a comma after the word ‘estimates.’
4. Page 102, Eqs. (4.37) to (4.48) – All μ ’s and ϵ ’s in these equations should be bold and unitalicized (i.e. $\boldsymbol{\mu}_{mn}$ and $\boldsymbol{\epsilon}_{mn}$) because they are matrices.
5. Page 109, second line from top – The text should reference Figure 4.4(a).
6. Page 109, second line after Eq. (4.88) – The text should reference Figure 4.4(b).
7. Page 110, second line after Eq. (4.90) – The text should reference Figure 4.4(b).
8. Page 111, third line after Eq. (4.91) – The sentence should reference Eq. (4.92) instead of (4.88).
9. Page 114, first and second lines from the top – “The function $A(x, y)$ is the complex amplitude function of the Bloch wave. β_x and β_y are the components of the Bloch wave vector. The amplitude part...” Delete the part that reads “, and \vec{r} is the position vector.”
10. Page 129, first line above MATLAB code – A comma should be inserted between DEZ and DHX.
11. Page 130, line 23 in MATLAB code – The line should read “`disp('DEZ = ');`”
12. Page 130, line just above last matrix – The line should read “`DEZ =`”
13. Page 137, Eq. (4.129) – Equation should be
$$\tilde{H}_{x0} = -\frac{E_{z0}}{k_0 \mu_r \Delta y} 2j \sin\left(\frac{k'_y \Delta y}{2}\right).$$
14. Page 137, Eq. (4.130) – Equation should be
$$\tilde{H}_{y0} = \frac{E_{z0}}{k_0 \mu_r \Delta x} 2j \sin\left(\frac{k'_x \Delta x}{2}\right).$$

15. Page 137, Eq. (4.131) – Equation should be

$$E_{z0} = -\frac{\tilde{H}_{y0}}{k_0 \epsilon_r \Delta x} 2j \sin\left(\frac{k'_x \Delta x}{2}\right) + \frac{\tilde{H}_{x0}}{k_0 \epsilon_r \Delta y} 2j \sin\left(\frac{k'_y \Delta y}{2}\right).$$

16. Page 137, first line after Eq. (4.132) – the inline equation should be $n = \sqrt{\mu_r \epsilon_r}$.
17. Page 138, first paragraph above Eq. (4.136) – The last sentence should be “Applying these relations to (4.135) gives”

Chapter 5

1. Page 143, two lines above Eq. (5.3) – “When a wave is an incident from...” should read as “When a wave is incident from...” The word “an” should be deleted from the sentence.

Chapter 6

1. Page 188, 6th line in last paragraph of section 6.3.4 – Sentence should begin with “Other parameter sweeps...” The word ‘parameter’ should be singular.
2. Page 193, paragraph just prior to Eq. (6.75) – $\tan\delta$ should be $\tan \delta$.
3. Page 193, three lines above Eq. (6.75) – Sentence should read “...in terms of their complex relative permittivity and complex relative permeability.”
4. Page 193, paragraph just after Eq. (6.75) – $\tan\delta$ should be $\tan \delta$.

Chapter 7

No errors identified.

Chapter 8

1. Page 221, line immediately above Eq. (8.39) – Sentence should begin as “Rotating meshgrids was...”
2. Page 229, Figure 8.5 – Second block in the section labeled “Perform FDFD” should read “Build Derivative Matrices.”
3. Page 230, 5th line from the top – Sentence should read as “...determine the physical size of...”

Chapter 9

No errors identified.

Chapter 10

1. Page 290, Figure 10.5(a) – Vertical axis should be labeled with z .
2. Page 295, third sentence below Fig. 10.10 – Nicolson-Ross-Weir should be italicized because an acronym is being defined.

Back Matter

1. Page 315, last line in first paragraph – The website is <https://raymondumpf.com/>.