

Errata

Text: *Fundamentals of Wireless Communication*, D. Tse and P. Viswanath, Cambridge University Press, 2005.

1. Page 27, Figure 2.10 caption: add "The peak of the sinc pulse for the i th path is at τ_i ".
2. Page 426, 5th line of Section 10.1.1: replace "Chapter 5" by "Chapter 7".

The following typos correspond to the first printing of the book and have been corrected second print onwards.

1. Page 6: 7th line from the bottom: "AWGN channel, as a baseline" should be replaced by "AWGN channel is used as a baseline".
2. Page 27: 5th line from the top replace "at the Nyquist sampling rate." by "above the Nyquist sampling rate."
3. Page 29: 3rd line from the top: missing close bracket at the very end of the line.
4. Page 44: in the 2nd line from the top replace "met" by "absorbed".
5. Page 44, equation (2.70): the displayed equation should be " $\frac{e^{-\eta\sqrt{\gamma}|r|}}{2}$ ".
6. Page 80, 2nd line: "can be calculated from (3.86)" should be replaced by "can be calculated from (3.91)".
7. Page 80, Equation (3.94): 1600 should be replaced by 10,000.
8. Page 80, 9th line from the bottom: replace " in depth in Chapters 7 and 9...." by "....in depth in Chapter 8....."
9. Page 81: all (i, j) should be converted to (j, i) in each of the equations (3.97) through (3.100).
10. Page 86, Figure 3.14: the symbol sent on the 3rd antenna at the 3rd time slot should be $x[1]$ instead of $x[3]$.
11. Page 93, Figure 3.19: \mathbf{X}_A and \mathbf{X}_B should be replaced by \mathbf{x}_A and \mathbf{x}_B , respectively.
12. Page 97: N should be replaced by N_c in each of the Figures 3.20, 3.21, and 3.22.
13. Page 97: N should be replaced by N_c in equation (3.135).
14. Page 113, Exercise 3.7, part 2: The second sentence should read: "Show that the product of SNR^2 and the difference between the upper bound and the actual pairwise error probability goes to a constant with increasing SNR."

15. Page 118, Exercise 3.26: In part 1, replace “Suppose $N = L$ ” by “Suppose $N = 1$ and replace $x[0]$ by $x[1]$. In part 3, replace “general block length $N \geq L$ ” by “general block length N ” and replace “for $m \leq N - L$ ” by “for $m \leq N$ ”.
16. Page 127, 15th line: “intra-sector” should be replaced by “inter-sector”.
17. Page 127, 2nd line after the displayed equation: “with P denoting the average received power” should be replaced by “with P denoting the average transmit power”.
18. Page 134, Equation (4.6): replace “for $\ell \neq 0$ ” by “for $\ell \neq 0$ ”.
19. Page 157, Exercise 4.2 part (3): in the second sentence, replace “list of of C numbers” by “list of C numbers”.
20. Page 158, Equation (4.29): replace “ $\text{sinc}(t - nT)$ ” by “ $\text{sinc}\left(\frac{t-nT}{T}\right)$ ”.
21. Page 158, Equation (4.30): replace “ $PP(d)$ ” by “ $PP(x)$ ”.
22. Page 159, 3rd line: “as the vector $\mathbf{p} = (p_1, \dots, p_K)^t$ ” should be replaced by “as the vector $\mathbf{p} = (P_1, \dots, P_K)^t$ ”.
23. Page 159, Equation (4.32): the displayed equation should read “ $(G\mathbf{I}_K - \mathbf{F}) \geq \mathbf{b}$ ”.
24. Page 161, Exercise 4.8, part 1(c): Replace “ $I(\alpha\mathbf{p}) \leq \alpha I(\mathbf{p})$ ” by “ $I(\alpha\mathbf{p}) < \alpha I(\mathbf{p})$ ”.
25. Page 174, label in the vertical axis of Figure 5.5: “ $\frac{P}{N_0} \log_2 e$ ” should be replaced by “ $\frac{P}{N_0} \log_2 e$ ”.
26. Page 175, Equation (5.18): “bits/s” should be replaced by “bits/s.” (i.e., a period is missing at the end of that sentence).
27. Page 180, 7th line after Equation (5.30): replace “the received SNR $P\|\mathbf{h}\|^2/N_0$ of the transmission” by “the received SNR, $P\|\mathbf{h}\|^2/N_0$, of the transmission”.
28. Page 198, last line: replace “separated in bot the sub-channels” by “separated in both the sub-channels”.
29. Page 208: the shaded area should be shifted over to the right in the top right figure.
30. Page 210, line 9: “uplink” should be replaced by “downlink”.
31. Page 219, Ex. 5.9(1): replace “in terms of the u_i ” by “in terms of “ u_1, u_2, \dots, u_M ”.
32. Page 221, Exercise 5.15: In Equations (5.126) and (5.127), replace “ $\mathbf{h}^t \mathbf{K}_x \mathbf{h}$ ” by “ $\mathbf{h}^* \mathbf{K}_x \mathbf{h}$ ”.
33. Page 221, Exercise 5.16, part (2): in the second line, replace “is non-positive as long as” by “is non-negative as long as”.
34. Page 224, Ex. 5.26 part 2: in the second line, replace “is larger than 0.5” by “is larger than 0.05”.

35. Page 252, 5th line from top: replace “continue focusing on” by “continue to focus on”.
36. Page 256, 8th line from top: replace “Rician case compared to the” by “Rician case, as compared to the”.
37. Page 294, 4th line from bottom: replace “hertz” by “Hertz”.
38. Page 310, the legend of Figure 7.11: “Here there are 4 receive antennas ($L_r=2$) and 6 transmit antennas ($L_r=3$)” should be replaced by “Here there are 6 receive antennas ($L_r = 3$) and 4 transmit antennas ($L_t=2$)”.
39. Page 314, Equation (7.66): “ $k, l = 0, \dots, n_r - 1$ ” should be “ $k, l = 0, \dots, n_t - 1$ ”.
40. Page 319, Example 7.1: in the paragraph preceding (7.76), “ $\Theta_t = 2$ ” should be replaced by “ $\Omega_t = 2$ ”.
41. Page 328, second para: “On the other” should be replaced by “On the other hand”.
42. Page 330, Exercise 7.2: in the second line, replace “period Δ_r ” by “period $1/\Delta_r$ ”.
43. Page 333, 5th line from the top: replace “mean square estimation” by “mean square error estimation”.
44. Page 341, last sentence: “The $\frac{\lambda_i}{\sqrt{n}}$ are” should be replaced by “ $\frac{\lambda_1}{\sqrt{n}}, \dots, \frac{\lambda_n}{\sqrt{n}}$ are”.
45. Page 350, line 21: “Optional” should be replaced by “Optimal”.
46. Page 350, displaced equation before (8.44): replace “ $\mathbf{x}_k[m]$ ” by “ $x_k[m]$ ”.
47. Page 351, sentence before (8.47): “ k th column of pseudoinverse” should be replaced by “ k th row of pseudoinverse”.
48. Page 379, penultimate line of Exercise 8.11: replace “learnt from Chapter 5 of [99]” by “learnt from Chapter 5 of [131]”.
49. Page 450, equation (10.36): \mathbf{y} should be replaced by y .
50. Page 460, Fig 10.22 upper: uncertainty sphere radius should be $\sqrt{N\sigma^2}$ instead of \sqrt{NP} .
51. Page 466, equation (10.69): \mathbf{y} should be replaced by y .
52. Page 489: N_ϕ should be replaced by N_0 in each of the equations (10.111), (10.112) and (10.114).
53. Page 496, two lines above (A.5): “ $Q(3) = 0.00015$ ” should be replaced by “ $Q(3) = 0.00135$ ”.
54. Page 501, equation (A.20): The density should be

$$f(r) = \frac{2r}{\sigma^2} \exp \left\{ \frac{-r^2}{\sigma^2} \right\}, \quad r \geq 0.$$

55. Page 503, equation (A.32): The random variable u should be conditioned on u_B instead of u_A .
56. Page 521, footnote: “Faro’s inequality” should be replaced by “Fano’s inequality”.
57. page 548, reference [47]: “Blcskei” should be replaced by “Bölcskei”.