Chapter 2

1. Page 11, Equation (2.5): insert “,” after “)“.
2. Page 15, line 15 from below: the entry $P_{0,1}$ should be $2p_d(1 - p_d)$, and $P_{0,2}$ should be $(1 - p_d)^2$.
3. Page 16, line 5: replace “$X_n$” by “$Z_n$”.
4. Page 16, line 7: replace “$Z_n$” by “$Z_k$”.
5. Page 25, line 10: replace “exiting” by “existing”.
6. Page 30, line 3 from below: replace “serves” by “serve”.
7. Page 38, line 13 from below: replace “$D = XAX^{-1}$” by “$A = XDX^{-1}$”.
8. Page 39, line 12 from below: replace “$x_i$” by “$|x_i|$”.
9. Page 46, line 6 of Exercise 2.20: replace “$i$” by “$k$”.

Chapter 3

1. Page 56, line 7 from below: replace “between between” by “between”.
2. Page 62, line 2 of Example 3.7: replace “form” by “from”.
3. Page 68, line 2: replace “$v_1$” by “$v_i$”.
4. Page 75, line 4 and 5: replace “$\phi'(1)$” by “$\phi'(1)$”.
5. Page 70, Line 5 from below: insert “is” before “tossed”.
6. Page 74, line 15: replace
   \[ E(z^T | X_0 = i, X_1 = 0) = 1. \]
   by
   \[ E(z^T | X_0 = i, X_1 = 0) = z. \]
7. page 75, Equation 3.31: replace $\phi(k)$ by $\phi_i(1)$.
8. Page 90, line 2 of Definition 4.4: insert “if” after “closed”. 

1
Chapter 4

1. Page 91, Figures 4.1: The label on the arc (1,2) should be $1 - \alpha$ and on the arc (2,1) should be $1 - \beta$.
2. Page 91, Figures 4.2: The label on the arc (2,2) should be $1 - \beta$.
3. Page 91, line 2 from below: replace “$C_1 = \{1\}$” by “$C_1 = \{0\}$”.
4. Page 92, line 8 from below: replace the second “$n$” by “$m$”.
5. Page 92, Figure 4.3: the labels on the nodes should be 0,1,2,$i-1$,$i$,$i+1$, $N-1$ and $N$.
6. Page 93, Example 4.8: Replace

$$P = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$$

by

$$P = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$$

7. Page 94, line 9: replace $\frac{1}{(n+1)(n+2)}$ by $\frac{1}{n(n+1)}$.
8. Page 94, line 13: replace $\frac{1}{(n+1)(n+2)}$ by $\frac{1}{n(n+1)}$.
9. Page 94, replace line 15 by

$$\frac{1}{n(n+1)} = \frac{1}{n} - \frac{1}{n+1}$$

10. Page 94: replace lines 17, 18, 19 by

$$\bar{m}_0 = \sum_{n=0}^{\infty} nP(T_0 = n|X_0 = 0)$$

$$= \sum_{n=1}^{\infty} \frac{n}{n(n+1)}$$

$$= \sum_{n=0}^{\infty} \frac{1}{n+1} = \infty.$$ 

11. Page 97, Theorem 4.7 (ii): replace “null transient” by “null recurrent”.
12. Page 98, line 12 from below: replace “finite” by “a communicating class”.
13. Page 99, line 1: Replace “The” by “Then”.
15. Page 102, line 5 from below: replace “$=$” by “$\leq$”.
16. Page 103, Equations 4.16 and 4.17: replace “$\nu(i)$” by “$d(i)$”.
17. Page 103, line 3 from below: replace “$y_i(r+1)$” by “$y_i^{(r+1)}$”.
18. Page 104, line 3: replace “$\leq$” by “$=$”.
19. Page 104, line 5: replace “$y_i^{(r+1)n}$” by “$y_i^{(n+1)n}$”.
20. Page 104, line 14 from below: insert “positive” before “recurrent”.
22. Page 107, Equation 4.23: replace “n = 1” in the sum by “n = 0”.

23. Page 107, last line: replace “n ≥ 0” by “k ≥ 0”.

24. Page 109, line 13: replace “P(\bar{T}_j = m)” by “P(\bar{T}_j = m|X_0 = j)”.

25. Page 109, line 14: replace “\tilde{u}_j(m)” by “u_m”.

26. Page 110, line 7: replace “\nu_n” by “nu_n”.

27. Page 113, line 5: insert “(by using the bounded convergence theorem)” after “get”.

28. Page 114, Equation 4.31: replace “p_{nd+r}^{(n\times r)}” by “p_{ij}^{(n\times r)}”.

29. Page 114, Equation 4.32: replace “M_{ij}(n + 1)” by “M_{ij}^{(n+1)}”.

30. Page 116: last line: replace “two” by “three”.

31. Page 117, line 5 from below: insert “is” after “This”.

32. Page 118: line 5: replace “analytical examples” by “analytical solutions”.

33. Page 118, line 4 in Example 4.21: replace “positive recurrent” by “irreducible”.

34. Page 119, the line above Example 4.22: replace “is” by “has”.

35. Page 119, line 6 in Example 4.22: replace “recurrent” by “irreducible”.

36. Page 120, line 14: replace “positive recurrent” by “irreducible”.

37. Page 122, line 10: insert “unique” before “solution”.

38. Page 122, line 11: replace “an” by “and”.


40. Page 124, line 8 from below: replace “\alpha_i(r)” by “u_i(r)”.

41. Page 124, line 6 from below: replace

\[ \sum_{m=N+1}^{\infty} u_m - \alpha_i(r) \leq \epsilon/2 \]

by

\[ u_i(r) - \sum_{m=N+1}^{\infty} u_m \leq \epsilon/2 \]

42. Page 124, last line: replace “the help of several examples” by “an example”.

43. Page 127, last line: replace “d(1 - p_u)” by “da(1 - p_u)”.

44. Page 128, line 4: replace “d(1 - p_u)” by “da(1 - p_u)”.

45. Page 124, line 9: replace “decision making” by “decisions”.

46. Page 129, line 14 from below: replace “\pi_2” by “\pi_B”.

47. page 129, line 6 from below: replace “DMTC” by “DTMC”.

48. Page 134, line 4 of exercise 4.14: replace “p_{01}” by “p_{01}”.

49. Page 140, line 6: replace “east” by “least”.

3
50. Page 141, line 12: insert “)” after “$X_{n+1}$”.

51. Page 142, line 8 from below: insert “recurrent” after “positive”.

Chapter 5

1. Page 147, line 8 from below: insert “$,$” after “$e^{-\lambda x}$”.

2. Page 150, line 14: replace “random $t$” by “random $T$”.

3. Page 151, line 7 from below: replace “exp” by “exp”.

4. Page 152, line 2 of Theorem 5.5: replace “Erl” by “Erl”. Page 153, line 2 from above, and line 3 from below: replace “$X + 2$” by “$X_2$”.

5. Page 152, line 4 from below: replace “$n!$” by “$(n - 1)!$”.

6. Page 154, line 2 of Theorem 5.7: replace “$G$” by “$G$”.

7. Page 157, line 3 from below: delete “$a$”.

8. Page 158, line 5 of Theorem 5.11: replace “$k_n - 1$” in the superscript by “$k_{n-1}$”.

9. Page 160: replace “$h^n$” in the second sum by “$h^{n-1}$”.

10. Page 163, lines 2,3 and 4 of the proof of Theorem 5.14: replace “$(t_i + dt_i)$” by “$(t_i, t_i + dt_i)$”.

11. Page 163, Page 163, line 5 of the proof of Theorem 5.14: replace “$(t_i - t_{i-1} + dt_i)$” by “$(t_i - t_{i-1}, t_i - t_{i-1} + dt_i)$”.

12. Page 167: figure 5.5: The label on the y-axis on the bottom graph should be “$N(t) = N_1(t) + N_2(t)$”.

13. Page 167, line 11 from below: replace “call” by “class”.

14. Page 168, line 10: replace “$Z_n$” by “$Z_1$”.

15. Page 168, line 16: replace “in the” by “in this”.

16. Page 169, line 8 from below: replace “$R_n = i$” by “$R_n = k$”.

17. Page 169, line 9 from below: replace “iid be” by “iid”.

18. Page 172, line 4 from below: insert “has” after “$0\}$”.


20. Page 177, Theorem 5.21: Replace

$$\frac{\Lambda^n}{n!}$$

on the right hand side by

$$\frac{\Lambda^{n-1}}{(n-1)!}$$

21. Page 177, last line: replace “call” by “called”

22. Page 179, line 4: replace “$(sZ_1)$” in the middle term by “$s(Z_1)$”.

23. Page 182, line 3: replace “lifetime” by “lifetimes”.

24. Page 184, lines 6 and 7: replace “minute” by “hour” (two instances).

25. Page 184, line 9: insert “a” after “is”.

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26. Page 187, line 9 from below: replace “.” by “...”.

Chapter 6

1. Page 205: line 3 of Theorem 6.4: replace “respect $t$” by “respect to $t$”.
2. Page 209, line 15 from below: replace “had” by “hand”.
3. Page 210, line 3 in Theorem 6.7: replace “$M$” by “$N$”.
4. Page 210, line 2 from below: replace “$m$” by “$N$”.
5. Page 211, line 4 of Example 6.18: replace the $(0,0)$th entry of $X^{-1}$ by $\frac{\mu_{11}}{X_{11}}$.
7. Page 216, last line: replace “computed by Equation 6.28” by “defined in Theorem 6.10”
8. Page 227, line 2: remove all four large parentheses.
9. Page 230, line 14 from below: replace “$t \geq 0$” by “$t \geq Y_1$”.
10. Page 230, line 12 from below: replace “$t \geq 0$” by “$t \geq Y_1$”.
11. Page 230, line 10 from below: replace “$n \geq 0$” by “$n \geq 1$”.
12. Page 233, line 1: replace “$p_i = 1/(i+2)$” by “$p_i = (i+1)/(i+2)$”.
13. Page 237, last line: replace “$n \to \infty$” by “$t \to \infty$”.
14. Page 242, line 5: insert “death parameters” before “$\mu_i$”.
15. Page 244, line 2: replace “$p_{1,n+1}$” by “$p_{1,n+1}$”.
16. Page 256, line 12: replace “DTMC” by “CTMC”.

Chapter 7

1. Page 279, line 7 from below: replace “sections” by “section”.
2. Page 280, line 8 from below: replace “7.31” by “7.1”.
3. Page 282, line 8: insert “are” after “there”.
4. Page 282, line 12 from below: replace “$i+1$” by “$i$” and “$i+2$” by “$i+1$”.
5. Page 283, line 3: replace “Once” by “One”.
6. Page 284, line 6 from below: replace “$j$” by “$j$”.
7. Page 285, line 3 from below: replace “$p_{kj}$” by “$b_{kj}$”.
9. Page 286, line 16 from below: delete “we have,”.
10. Page 288, line 2 from below: replace “for a” by “for an”.
11. Page 290, line 11: replace “for an” by “for a”.

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13. Page 291, line 17: replace “1_{S_n \leq t < D_n}” by “1_{\{S_n \leq t < D_n\}}”.

14. Page 296, line 5 from below: replace “n\mu” by “n\mu_i”.

15. Page 297, line 9 in Section 7.3.5: replace “(N - n)” by “\min(N - n, s)”.

16. Page 297, line 11 in Section 7.3.5: replace “\min(n, s)” by “n”.

17. Page 301, line 10: insert “given” after “is”.

18. Page 303, Figure 7.4: the return arc label should be “1 - \alpha”.

19. Page 303, line below Figure 7.4: insert “(" before “\lambda”.

20. Page 309, lines 2 and 4 above Example 7.11: replace “G(K)” by “G_N(K)”.

21. Page 311, Figure 7.7: the label on the arc from CPU tp Printer should be “\alpha” and that on the arc from CPU to the Disc Drive should be “1 - \alpha”.

22. Page 315, line 7: insert “n” after “in”.

23. Page 316, line 5 from below: replace “the n” by “the nth”.

24. Page 319: line 1 of Example 7.15: replace “service” by “inter-arrival”.

25. Page 321, Figure 7.8: The caption in the lower box should read

   Single Server
   No Waiting Space

26. Page 325, line 3 of Exercise 7.1: replace “essentially” by “an”.

27. Page 328, line 3 of Exercise 7.3: replace “little’s law” by “Little’s Law”.

28. Page 331, line 3 of Exercise 7.29: insert “is” after “server”.

29. Page 331, Figure 7.9: the label on the horizontal arrow out of the last node should be “1 - p”.

30. Page 332, Figure 7.9: the labels on the horizontal arrows should be “1 - p_1”, “1 - p_2”, “1 - p_N-1”, and “1 - p_N”.

31. Page 333, part 2 of Exercise 7.41: replace “1 \leq j \leq K” by “1 \leq i \leq N”.


33. Page 336, line 2 of Exercise 7.56: replace “7.12” by “7.13”.

Chapter 8

1. Page 342, line 6: delete “0,“.

2. Page 342, line 12: replace “k_n” by “k_2”.

3. Page 342, line 11 from below: replace the first “k_n” by “k_2”.

4. Page 342, line 5 from below: replace “S_{k_n + 1} \leq t_n + X_1” by “S_{k_n + 1} - X_1 \leq t_n”.

5. Page 343, line 11: replace “G(0-) = 1” by “G(0-) = 0”.

6. Page 344, line 3 from below: replace “which” by “whose probability is”.

7. Page 347, line 6 from below: replace “infty” by “infinity”.

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8. Page 348, equation 8.12: replace “= x)” by “≤ x) =”.
9. Page 352, line 12 from below: replace “S∗ n ≤ S n” by “S n ≤ S∗ n”.
11. Page 355, line 2: replace “Gi khó” by “Gi ph”.
12. Page 370, line 7: insert “in” before “the”.
13. Page 370, line 9 from below: replace “G” by “F”.
14. Page 373, Figure 8.7: replace the label “Z(t)” by “X(t)” on the vertical axis.
15. Page 375, the lower part of Figure 8.8: replace the label “Z(t)” by “X(t)” on the vertical axis.
16. Page 377, last line: insert “+P(U1 > t)” before the “,”
17. Page 378, line 3: insert “+ lim t→∞ P(U1 > t)” before the “.”
18. Page 378, line 15 from below: replace “chapter” by “section”.
19. Page 378, line 6 from below: insert “= Gi t(∞)” after “pi t”.
20. Page 380, line 14 from below: replace “S1 t” by “Y1 t”.
21. Page 395, Figure 8.10: replace “Z(t)” by “X(t)” as the label for the vertical axis.
24. Page 401, last line replace “E(min(U + D, t))” by “E(min(U + D, t))”.
25. Page 404, line 12 of Exercise 8.51: replace “φk(s)” by “µ/(s + µ)”.

Chapter 9

1. Page 413, last line: replace “min” by “sup”.
2. Page 418, line 4: replace “≤” by “=”.
3. Page 424, line 12 from below: replace “implicity” by “implicitly”.
5. Page 426, Equation 9.35: replace “X(t) = k” by “Z(t) = k”.
6. Page 427, line 3: replace “τr” by “τe”.
7. Page 427, line 11 from below: replace “P(X(t) = j)” by “P(X(t) = j|X(0) = i)”.
8. Page 428, lines 7 and 8: On each line insert “to” after “Sn+1 t”.
9. Page 430, line 7: replace “s” by “u”.
10. Page 430, line 15: replace “αk” by “αkj”.
11. Page 432, line 3: replace the right hand side by “1 − e−2µx,”
12. Page 432, line 14: replace “A(λ)” by “A(µ)”.
13. Page 433, line 8: insert “death parameters” before “µ”.

7
15. Page 435, line 14 from below: insert “be” after “Z(t)”.
16. Page 436, lines 14 and 15: replace “1_{Z(t)=j}” by “1_{\{Z(t)=j\}}”.
17. Page 441, line 3: replace “(1, 2)” by “(i = 1, 2)”.

Chapter 10

1. Page 446, line 14: delete “part 1 of”.
2. Page 446, line 5 from below: insert “finite dimensional” after “the”.
3. Page 447, lines 9 and 11: replace “]” by “[T]”.
4. Page 447, line 15: insert “=” before “0”.
5. Page 453, lines 10 and 11: replace “(a)” by “(0)”.
6. Page 462: the four lines above Theorem 10.17 should not be in italic.
7. Page 465, line 1: replace “B(u)” by “X(u)”.
8. Page 466, line 6: the short “]” should be longer.
9. Page 467, line 13: the long “]” should be shorter.
10. Page 471, line 16: replace “is the” by “is”.
11. Page 472, line 3 of Definition 10.9: replace “X(u)” by “B(u)”.
12. Page 473, line 3: replace “X(u)” by “B(u)”.
13. Page 483, line 17: delete “and” after “American”.
15. Page 485, line 1: replace “b(t)” by “b(t)”.

Appendices

1. Page 491, last line: replace “P(φ) = 1” by “P(φ) = 0”.
2. Page 494, line 6 from below: replace “function” by “functions”.
3. Page 497, line 4 from below: delete “for”.
4. Page 499, line 11: replace “differential” by “continuous”.
5. Page 501, line 6 from below: replace

\[
\mu = \begin{bmatrix} \mu_1 \\ \mu_2 \end{bmatrix}
\]

by

\[
\mu = [\mu_1 \mu_2]
\]

6. Page 501, line 3 from below: replace “(a - \mu_2)” by “(a - \mu_2)^{\top}”.
7. Page 503, line 6: replace “in” by “are given in”.
8. Page 505, line 6: replace “in” by “are given in”.
9. Page 513, line 6 from below: insert “.” after “k \geq 0”.

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