## CRYPTOGRAPHY AND NETWORK SECURITY

## Errata

## Chapter 1

| Page | Location | Correction |
| :--- | :--- | :--- |
| 6 | Heading 1.3 | Change Mechanism to Mechanisms |

## Chapter 2

| Page | Location | Correction |
| :--- | :--- | :--- |
| 22 | Divisibility | Change a\|n to n|a. The same with $\boldsymbol{a}$ not divide $\boldsymbol{n}$. |
| 33 | Example 2.17, b | Change $\mathbf{3 4}$ to $\mathbf{4 3}$. |
| 34 | Example 2.19 | Change $(\mathbf{1 0} \bmod \boldsymbol{x})^{\boldsymbol{n}}$ to $(\mathbf{1 0} \bmod \boldsymbol{x})^{\boldsymbol{n}} \bmod \boldsymbol{x}$ |
| 37 | Figure 2.15 | Change $\boldsymbol{a}$ to $\mathbf{n}$ |

## Chapter 3

| Page | Location | Correction |
| :--- | :--- | :--- |
| 77 | Example 3.18 | Change 3.22 to 3.21 in the title of the figure |
| 94 | Exercise 26 | Change "XVIEWYWT" to "XVIEWVWT" |

## Chapter 4

| Page | Location | Correction |
| :--- | :--- | :--- |
| 106 | Figure 4.6 | Change $\mathbf{0}$ to $\mathbf{1}$ in inverse table (third column, first row) <br> Change $\mathbf{1}$ to $\mathbf{0}$ in inverse table (third column, second row) |

## Chapter 5

| Page | Location | Correction |
| :--- | :--- | :--- |
| 143 | Line 9 | Change plaintext to encryption cipher |
| 143 | Line 10 | Change cipher to decryption cipher |
| 153 | Line 9 | Change cells to taps |
| 153 | Line 18 | Change $\left(\boldsymbol{x}^{7}+\mathbf{1}\right)$ to $\left(\boldsymbol{x}^{\mathbf{1 5}}+\mathbf{1}\right)$ |
| 153 | Line 18 | Change $\left(\boldsymbol{x}^{\mathbf{3}}+\mathbf{1}\right)$ to $\left(\boldsymbol{x}^{\mathbf{1 1}}+\boldsymbol{x}^{\mathbf{8}}+\boldsymbol{x}^{7}+\boldsymbol{x}^{5}+\boldsymbol{x}^{\mathbf{3}}+\boldsymbol{x}^{\mathbf{2}}+\boldsymbol{x}+\mathbf{1}\right)$ |
| 153 | Line 18 | Change $\mathbf{2}^{\mathbf{3}}-\mathbf{1}=\mathbf{7}$ to $\mathbf{2}^{\mathbf{4}}-\mathbf{1}=\mathbf{1 5}$ |
| 164 | Table 6.2 | Change $\mathbf{3 1}$ to $\mathbf{3 0}$ (the first 31 only) |

## Chapter 6

| Page | Location | Correction |
| :--- | :--- | :--- |
| 169 | Algorithm 6.1 | In the mixer routing, change leftBlock[48] to leftBlock[32] <br> In the mixer routing, change rightBlock[48] to rightBlock[32] |
| 177 | Line 8 (3. The...) | Change six to four |
| 188 | Exercise 15.a | Change $\mathbf{1 1 0 0 0 0}$ to $\mathbf{0 0 0 0 0 0}$ |
| 188 | Exercise 15.b | Change $\mathbf{0 0 1 1 1 1}$ to $\mathbf{1 1 1 1 1 1}$ |
| 188 | Exercise 23 | Change 3, 4, and 5 to 3, 4, 5, and 6 |

## Chapter 7

| Page | Location | Correction |
| :--- | :--- | :--- |
| 169 | Figure 7.4 | In the title of the figure, change ciphertext to plaintext |
| 200 | Figure 7.8 | In matrix X, in the last row, last column, Change $\mathbf{0}$ to $\mathbf{1}$ |
| 207 | Algorithm 7.4 | Change $\mathbf{W}_{\text {round }+4 \mathrm{c}}$ to $\mathrm{W}_{4 \text { round }+c}$ |
| 216 | Figure 7.20 | At the decryption side, move $\left(\leftarrow \mathrm{W}_{36}-\mathrm{W}_{39}\right)$ one sell up |
| 224 | Exercise 34 | Change MixColumn to MixColumns |
| 224 | Exercise 38 | Change reverse to inverse |

## Chapter 8

| Page | Location | Correction |
| :--- | :--- | :--- |
| 230 | Algorithm 8.2 | In the title, change ECB to CBC |
| 242 | Figure 8.12 | Add $x^{2}$ to the third characteristic |

## Chapter 9

| Page | Location | Correction |
| :--- | :--- | :--- |
| 259 | Fermat Function | In the shaded area, change $\mathbf{F}_{\mathbf{1}}=\mathbf{3}$ to $\mathrm{F}_{\mathbf{0}}=\mathbf{3}$ <br> In the shaded area, add $\mathbf{F}_{\mathbf{1}}=5$ above $\mathrm{F}_{2}=17$ |
| 262 | Line 7 | Change $\boldsymbol{a}^{\boldsymbol{n}}-\mathbf{1}$ to $\boldsymbol{a}^{\boldsymbol{n - 1}}$ |
| 262 | Line 8 | Change $\boldsymbol{a}^{\boldsymbol{n}}-\mathbf{1}$ to $\boldsymbol{a}^{\boldsymbol{n - 1}}$ |
| 271 | Example 9.42 | Change $\mathbf{1 5}^{(\mathbf{2 3 - 1}) / \mathbf{2}}$ to $\mathbf{1 6}^{(\mathbf{2 3 - 1}) / \mathbf{2}}$ |
| 280 | Figure 9.7 | Change the second (from right) $\boldsymbol{x}_{\mathbf{0}}=1$ to $\boldsymbol{x}_{\mathbf{1}}=\mathbf{1}$ |

## Chapter 10

| Page | Location | Correction |
| :--- | :--- | :--- |
| 302 | Figure 10.6 | Remove an extra small 2 in the encryption box |
| 315 | Algorithm 10.6 | In the fourth line, change $(\boldsymbol{q}, \boldsymbol{n})$ to $(\boldsymbol{p}, \boldsymbol{q})$ |
| 316 | Algorithm 10.8 | In the comment, change the second algorithm to theorem |
| 319 | Example 10.10 | Delete the word Ciphertext at the beginning of line 5 |
| 325 | Figure 10.14 | Add one extra row to the table Points, (12, 5) (12, 8) |

## Chapter 11

| Page | Location | Correction |
| :--- | :--- | :--- |
| 343 | Figure 11.6 | Remove the word resistance from the title |
| 346 | Table 11.3 | Add a minus sign in from of the exponent: $\mathbf{P}=\mathbf{1}-\mathbf{e}^{-k(k-1) / 2 N}$ |
| 359 | Exercise 20 | Change (A, B, C, D, E) to (A, B, C, D, F) |
| 361 | Exercise 26 | Change every $\mathbf{m}$ to $\mathbf{n}$ |
| 361 | Figure 11.16 | Change every $\oplus$ to + |
| 362 | Exercise 27, part i | Change every + to $\oplus$ Change $\mathrm{G}_{\mathrm{i}}=\mathrm{H}_{\mathrm{i}} \bmod 2^{\mathrm{N}}$ to $\mathrm{G}_{\mathbf{i}}=\mathrm{T}_{\mathbf{i}} \bmod \mathbf{2}^{\mathbf{N}}$ |

## Chapter 12

| Page | Location | Correction |
| :--- | :--- | :--- |
| 369 | Solution: line 1 | Change 32 to 64 |
| 371 | Table 12.2 | In the second column, third row, change last 8 to B |
| 387 | Exercises 20 to 24 | Remove extra 4 at the end of the four group (34564 to 3456) |
| 388 | Exercise 32 | Remove part b |
| 388 | Exercises 34 and 35 | Change Figure 12.4 to Figure 12.14 |

## Chapter 13

| Page | Location | Correction |
| :---: | :---: | :---: |
| 394 | Figure 13.5 | Change Encryption to Decryption in the right box |
| 396 | Figure 13.6 | Change (M, e, n) to (M, d, n) and change (S, d, n) to (S, e, n) |
| 404 | Figure 13.12 | In the verifying box, change $\mathbf{M} \mid \mathbf{e}_{1}{ }^{\text {S1 }} \mathbf{e}_{2}{ }^{-S 2}$ to $\mathbf{M} \mid \mathrm{e}_{1}{ }^{\text {S2 }} \mathrm{e}_{2}{ }^{\text {S1 }}$ |
| 406 | Line 10 | Add $\bmod p$ at the end of the line |
| 410 | Line 24 | Change $\mathrm{S}_{\text {blind }}=$ to $\mathrm{S}_{\mathrm{b}}=$ |
| 413 | Exercise 13 | Change $\mathbf{h ( 4 0 0 ) ~ t o ~ h ~ ( . . . ) ~}$ |

## Chapter 14

| Page | Location | Correction |
| :---: | :--- | :--- |
| 436 | Exercise 30 | Change second to first at the end of the second line |

## Chapter 15

| Page | Location | Correction |
| :--- | :--- | :--- |
| 463 | Exercise 12 | Change four to two |
| 463 | Exercise 15 | Change four nonces to two nonces |
| 463 | Exercise 15 | Change $\left(\mathbf{R}_{\mathbf{A}}, \mathbf{R}_{\mathbf{B}}, \mathbf{R}_{\mathbf{1}}\right.$, and $\left.\mathbf{R}_{\mathbf{2}}\right)$ to $\left(\mathbf{R}_{\mathbf{A}}\right.$ and $\left.\mathbf{R}_{\mathbf{B}}\right)$ |
| 463 | Exercise 16 | Change four nonces to two nonces |

## Chapter 16

| Page | Location | Correction |
| :---: | :--- | :--- |
| 489 | Figure 16.18 | Add Public Key to the lowest box |

## Chapter 17

| Page | Location | Correction |
| :--- | :--- | :--- |
| 489 | Figure 17.9 | Change PM to M (three times) |

## Chapter 18

| Page | Location | Correction |
| :--- | :--- | :--- |
| 556 | Figure 18.9 | Change $\mathbf{N}+\mathbf{W}$ to $\mathbf{N}+\mathbf{W}+\mathbf{1}$ |
| 559 | Table 18.2 | Add Parameters and Description to column heads |
| 565 | Figure 18.17 | Change $\boldsymbol{g}^{\boldsymbol{y}}$ and $\boldsymbol{g}^{\boldsymbol{r}}$ |

## Chapter 18

| Page | Location | Correction |
| :--- | :--- | :--- |
| 574 | Figure 18.26 | Add one padlock to the legend (last item) |
| 591 | Exercise 19 | Change $\mathbf{1 9}$ to $\mathbf{1 8}$ |
| 591 | Exercise 30 | Change general to original |
| 592 | Exercise 36 | Change $\mathbf{3 6}$ to $\mathbf{3 5}$ |

