

## Errata for “Geršgorin and His Circles”

### Chapter 1:

- p.7, two lines below eq (1.14): the superscript “x”, in the first item on this line, should be a bold-face x.
- p.12 line +13. Read “ $\{v_1, v_2, \dots, v_n\}$ ” for “ $\{v_i, v_2, \dots, v_n\}$ ”.
- p.15, line +8. Read “ $a_{i_1, i_1}$ ” for “ $a_{i, i_1}$ ”.
- p.15, line -7. Read “Fig. 1.6” for “Fig. 1.8”.
- p.22, line -4. The last exponent “ $\frac{i}{p}$ ” in eq. (1.38) should be “ $\frac{1}{p}$ ”.
- p.24, line +8. Insert a space between “Theorem” and “on”.
- p.27, line +7. Insert a comma before “let”.
- p.28, line +12. Read “(cf.(1.48))” for “(cf.(1.50))”.
- p.28, line +1 below eq. (1.56). Read “with (1.54)” for “with (1.55)”.
- p.31, line +6. Read “results” for “result”.
- p.31, line +8. Read “were those” for “was that”.
- p.31, line +11. Read “Hadamard’s for ”Hadamard’s.
- p.31, line +20. Read “Theorem 1.6” for “Theorem 1.8”.
- p.31, line +26. Insert a comma after “(1931)”.

### Chapter 2:

- p.36, line -3. Read “Exercise 3” for “Exercise 4”.
- p.43, line +3 after eq. (2.31). Read “(2.6),” for “(2.6),”.
- p.55, line +7 below eq. (2.54). Delete the period after the exclamation point.
- p.57, line +3. Read “Brualdi” for “rualdi”.
- p.60, line -4. Read “ $\{\theta_i\}_{i=1}^4$ ” for “ $\{\theta_1\}_{i=1}^4$ ”, i.e., replace the subscript  $j$  by  $i$ .
- p.71, line -13. Insert the word “condition” after the word “sufficient”.

### Chapter 3:

- p.77, line +3. Read “Exercise 4” for “Exercise 3”.
- p.78, line +2. Replace the period between  $\mathcal{B}_{\phi_4}^{r_x}(C_3)$  and  $\mathcal{B}_{\phi_5}^{r_y}(C_3)$  by a comma.
- p.82, eq. (3.37). Under the second summation sign, replace “ $j \neq 1$ ” by “ $j \neq i$ ”.
- p.86, line +5 below eq. (3.43). Read “singleton” for “singelton”.
- p.87, eq. (3.43). Replace the subscript “ $j$ ” in  $r_j^s(A)$  by “ $i$ ”.
- p.87, eq. (3.49). Read “ $\{r_i(A)\}_{i \in N}$ ” for “ $\{r_j^s(A)\}_{i \in N}$ ”.
- p.92, line 2 above eq. (3.60). Read “distinct” for “district”.
- p.93, line -4. Insert are right brace and comma after “ $r_j(A)$ ”, to read “ $r_j(A)\}$ ”.

## Chapter 4:

- p.96, eq.(4.5). Read " $\Gamma^{\mathbb{R}}(A)$ " for " $\Gamma^R(A)$ ".
- p.104, line +20. Insert a space after "star-shaped".
- p.109, caption for Fig. 4.3. Read "Exercise 9" for "Exercise 7".
- p.111, line 1 above eq. (4.40). Read " $\Omega(A)$ " for " $T(A)$ ".
- p.111, line -6. Read "of (4.42)" for "above".
- p.115, line 1 of Theorem 4.9. Replace ", and assume that" by ". Then,".
- p.115, line 2 of Theorem 4.9. Replace ". Then," by "if and only if".
- p.115, line 3 below Theorem 4.9. Read " $\text{diag}(1, x_2)$ " by " $\text{diag}[1, x_2]$ ".
- p.117, line +7. Read "(4.45)" for "(4.54)".
- p.125, line +15. Read "Exercise 5" for "Exercise 3".

## Chapter 5:

- p.135, line. Read "C.1" for "C.2".
- p.135, line +20. Insert a period after  $\mathbb{G}_{\sigma_n}^c$ .
- p.137, line4 of Theorem 5.12. Replace "ii" by "iii".
- p.138, lines -11, -10, -4, and -3. Replace "ii" by "iii".
- p.144, Exercise 2. Insert "=" after "matrix  $A$ ".
- p.145, line +3. Read "Carlson and Varga(1973a)" for "Hoffman and Varga (1970)".
- p.149, line -16. Remove "Generalized".
- p.153, line +11. Replace "with" with "in".
- p.153, line -2. Read "Carlson and Varga(1973a)" for "Hoffman and Varga (1970)".

## Chapter 6:

- p.158, line 2 above Theorem 6.3. Insert a space between " $\Gamma_{\pi}^{\phi}(A)$ " and "the".
- p.159, eq. (6.16), line 2. Read " $\{r_{i,\pi}^{\phi}(A) \cdot r_{j,\pi}^{\phi}(A)\}$ " for " $\{r_{i,\pi}^{\phi}(A)\}$ ".
- p.159, line1 beneath eq. (6.16). Insert a space between " $K_{\pi}^{\phi}(A)$ " and "the".
- p.161, line 2 below eq. (6.23). Read " $\mathbb{C}^{4 \times 4}$ " for " $\mathbb{C}^{4,4}$ ".
- p.163, line 3 of Exercise 1. Insert a space between "O" and "if".
- p.165, line 3 above eq. (6.31). Replace "then" by "than".
- p.167, line 1 below eq. (6.38). Reduce the spacing between " $\mathcal{R}_{\pi}^{\phi}(A)$ " and ",".
- p.168, eq. (6.40). Insert a space between "or" and " $|z - 5|$ ".
- p.170, line +3. Read "x's" for "x's".
- p.172, line 2 below eq. (6.51). Read " $\ell \times \ell$  matrix  $\| [(zI - D_{\pi})^{-1}(A - D_{\pi})_{j,k} | \phi] \|_{\infty}$ . Then...
- p.174, line +10. Read "eigenvalues of  $A$ " for "eigenvalues of  $\sigma(A)$ ".
- p.175, caption for Fig. 6.4, line 2. Read "of Exercise 7 of Section 6.2".
- p.176, line -3. The last subscript,  $\pi$ , should be larger and on the same line as the subscript " $k$ ".
- p.181, second last line of Exercise 2. Read " $9.6 \cdot z$ " for " $9.6z$ ".
- p.182, line 3 above Def. 6.18. Replace "Definition 5.4" by "Definition 5.1".
- p.183, last display. Interchange the positions of " $\geq$ " and "[".
- p.185, line 2 below eq. (6.81). Read " $\sigma_j =$ " for " $\sigma_i =$ ".
- p.185, line -6. Replace "subspace" by "subspaces".
- p.186, line +9. Read "last two of" for "last of".
- p.186, line -17. Read "Exercise 2" for "Exercise 1".
- p.202, line 1 of Definition C.3. Read " $a_{i,j}$ " for " $a_{i,j}$ ".

## References:

- p.217, line -7. Read “[127, 145, 153]” for “[127, 153]”.  
 p.217, line -2. Read “Analysis) 18, 73-80.” for “Analysis (to appear)”.  
 p.218, Delete “a” in “(1962a)” of Fiedler, M. and Ptàk, V. (1962a).  
 p.218, line -5. Delete the final “[145]”.  
 p.220, line -9. Read “Image 32, 2-5.” for “Image (to appear).”

## Index:

- p.224, line +7. Replace “the” by “a” to read “relative to a partition”.

## Symbol Index:

- p.225, Add “ $\mathbb{C}_\pi^{n \times n}$ ” partitioned matrix in  $\mathbb{C}^{n \times n}$  with nonsingular diagonal blocks, 181.