Errata

An Introduction to Difference Equations

Third Edition, 2005

Saber Elaydi

IV: "An Introduction to Difference Equations/Saver" should read "An Introduction to Difference Equations/Saber"

p.18: Exercises 1.3, delete 5(b)

p.21: Eq. (1.4.3), replace $h\ g\ [u, x(u)]$ with $h\ g\ (n, x(n)$.

p.21: ↓line 15 $g\ (x^*) = 0$ should be replaced by $g\ (n, x^*) = 0$ for all $n\ \geq 0$.

p.29: Theorem 1.15 ↑line 4, "The following statements then hold" should read "assume that $f\ \in C^3$. Then the following statements hold"

p. 30: ↑lines 4 and 5, "Figures 1.20, 1.21, 1.22, 1.23" should read "Figures 1.20, 1.21".

p. 31: ↑ line 6, "Problem 14" should read "Problem 14 (see Figures 1.22, 1.23)."

p.32: Theorem 1.16, line 2, "The following statements then hold" should read "Assume that $f\ \in C^3$. Then the following statements hold"

p.34: ↑line 7 "(1.1.1)" should read "(1.5.1)"

p.34: ↑line 11 "(1.5.1)" should read "(1.5.4)"

p.38: Figure 1.28 ↓ line 2, "$x(n = 2)$"should read "$x\ (n + 2)$."

p.40: Exercise 1.6, problem 2, "Example 1.17" should read "Example 1.7".

p.40: Exercise 1.6, problem 5, "$x(n + 1) = 1 - x^2$" should read "$x(n + 1) = 1 - x^2(n)$"

p. 42: ↑ line 7, "$g(0) = 2$" should read "$\lim_{y \Rightarrow 0} g(y) = 2$"

p.52: ↓ line 7 "$[a, c)(c, b]$" should read "$[a, c), (c, b]$"

p. 65: ↑ line 11, "$y(6) = \cdots = -\frac{3}{2}$" should read "$y(6) = \cdots = \frac{-5}{2}$"

p. 76: Lemma 2.22, line 1, "$\binom{n}{2}\lambda_2^{n-2}$" should read "$\binom{n}{2}\lambda_i^{n-2}$"

p. 76: ↑ line 1: "$W(0) = \frac{1}{(2!3!...(m_i-2)!}$" should read "$W(0) = \frac{1}{2!3!...(m_i-2)!}$"

pp. 83, 85.87,89: Running title "undetermind" should read "undetermined".

p. 96: ↓ line 3, "minimum" should read "maximum".

p. 153: In Lemma 3.28

line 1 ↓ "Let B be a $k \times k$" should read "Let C be a $k \times k$…"

line 2 ↓ "some $k \times k$ matrix C such that $c^m = B$" should read "some $k \times k$ matrix B such that $B^m = C$".

↓ line 4: "$P^{-1}\ BP$" should read "$P^{-1}\ CP$"

↓ line 5: "be the Jordan form of B" should read "be the Jordan form of C"

p. 154: ↑ line 3, "Define $C = \cdots$ ". Then $C^m = \cdots = \cdots = B$" should read "Define $B = \cdots$ ". Then $B^m = \cdots = \cdots = C$"

p. 162: ↓ line 1, "denoted" should read "given".

p. 169: ↓ line 8, "lll0.2" should read "0.2".

p.174: ↑ line 1, [85] should read [68].

p. 204: ↑ line 15, delete "defend as".

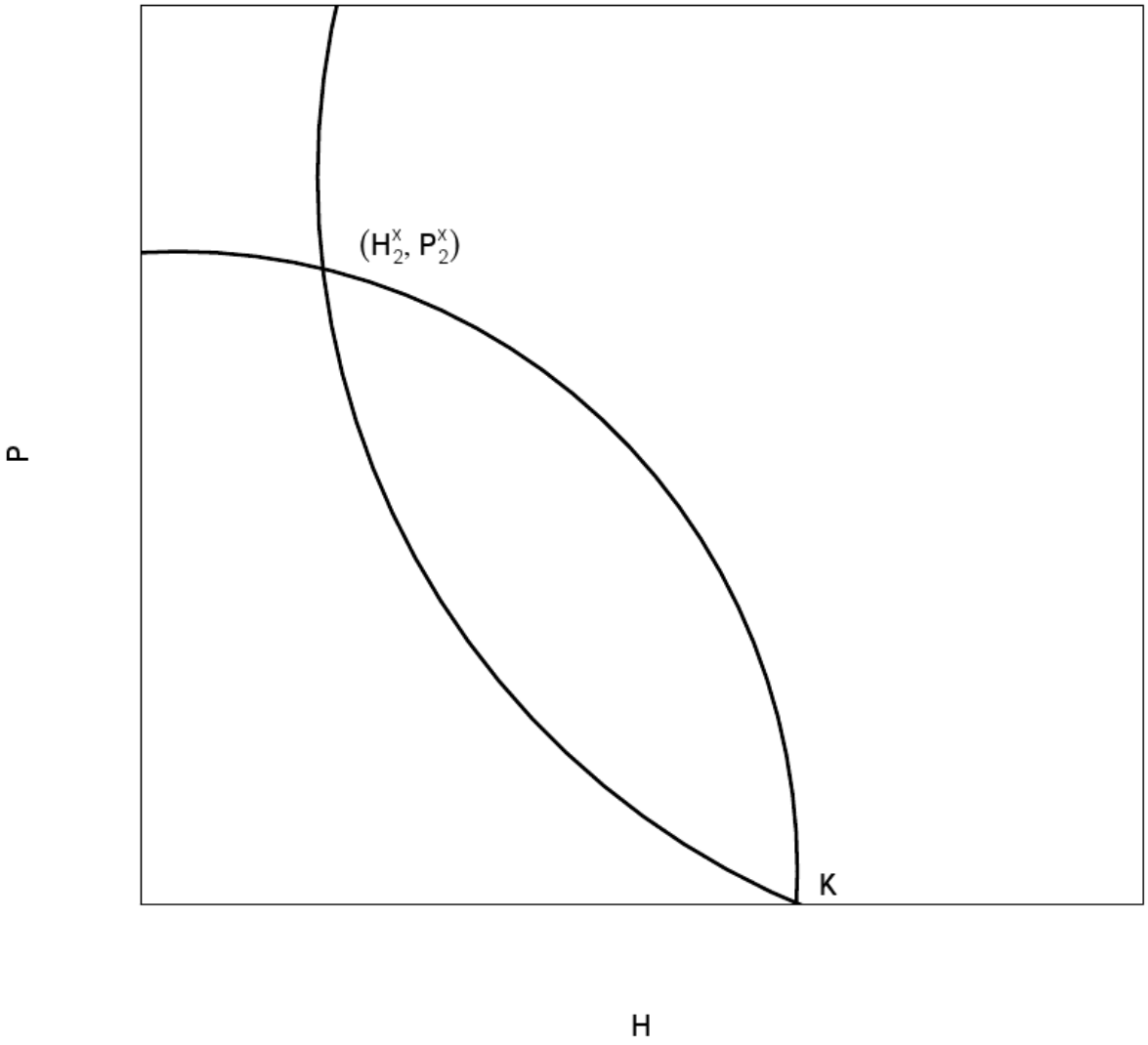
p. 204: ↑ line 1, "$B\ x^*, \gamma)$" should read "$B\ (x^*, \gamma)$".

p. 219: ↓ line 21, "The" should read "Then".

p. 227: ↓ line 3, "(S^*, J^*)" should read "(S^*, I^*)".

p. 231: ↓ lines 8 and 10, "$-2\ a\ x - \cdots$" should read "$-2\ a\ x + \cdots$".

p.236: Graph should instead look as



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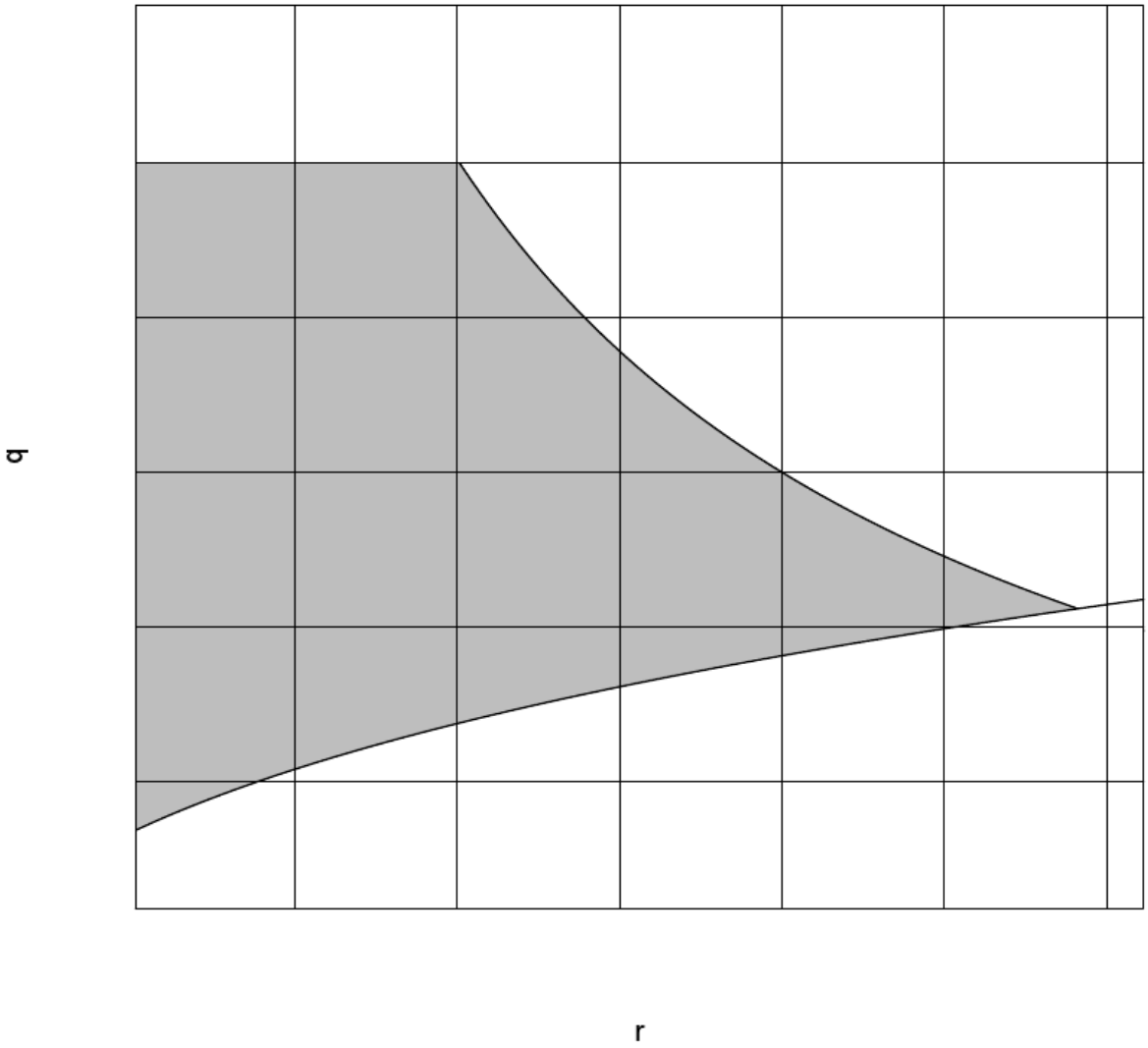
p. 236: In middle of the page after “The equilibrium points are solutions of…” remove $*$ superscript of P and H, so P^* should read P and H^* should read H until the end of Equation 7.7.23. After that keep the asterisk $*$.

p. 236: ↑ line 3, “(4.7.19)” should read “(4.7.23)”.

p. 238: ↓ line 4, “4.7.24” should read “4.7.28” and “4.7.25” should read “4.7.29”.

p. 237: correct the graph 4.31



p. 297: ↑ line 15, “expendable” should read “extendable

p. 297: ↓ line 1, “6.16” should read “6.17”.

p. 297: ↓ line 3, “$g(z)$” should read “$g(1)$”.

p. 299: ↓ line 5, “(3.5.1)” should read “(6.3.1)”.

p. 303: ↓ line 5, “of $y\hat{}(0)$” should read “of $y(n)$”.

p. 306: ↑ line 1, “$\frac{1}{2}$” should read “$\frac{1}{z}$”

p. 307: ↓ line 1, "$\frac{1}{2}$" should read "$\frac{1}{z}$"

p. 387: ↑ line 9, "Coffman [22] considers" should read "Coffman [22] considered"

p. 426: ↑ line 4, "(schäfli's…)" should read (schlafli's…)"

p. 480: ↑ line 10, "$f_i(0) = -1$" should read "$f_i(0) = 1$"

p. 492: ↑ line 9, "(5.1.20)" should read "(5.1.18)"

p. 492: ↑ line 12, "(5.1.20)" should read "(5.1.18)"

p. 504: ↓ lines 3 and 5, P_* should read p^*.

p. 505: ↑ line 8, "$(-1)^{n+1}(27)4^n$" should read "$(-1)^{n+1} \times 36 \times 4^n$"

p. 506: add the answer for problem 16 in Exercise 2.2

↓ line 8, insert "16. $(n+1)\sum_{r=0}^{n-1} \frac{(-1)^r}{(r+2)!}$"

p. 507: Exercise 2.6

11. Replace by $y(0)\ e^{c(2^n-1)}$

13. Replace by $1 - \cot(c2^n)$

p. 538: ↓ line 12, "schäfli's…" should read "schlafli's…"

http://www.springer.com/978-0-387-23059-7

An Introduction to Difference Equations
Elaydi, S.
2005, XXII, 540 p., Hardcover
ISBN: 978-0-387-23059-7