
Acknowledgment: The author wishes to acknowledge the assistance of Dr. Ercan Atam, Imperial College London, for his careful and thoughtful reading of this book and for pointing out the following corrections.

1. Page 44. In Example 3.2, change the (3,3) element of $D^{-1}$ to "1".

2. Page 50. Change the first line in the statement of Theorem 3.6 to "Let $f$ be a quadratic function. Then the following hold."

3. Page 58. Equation (3.30) is ambiguous in the ranges of $i$ and $k$ and should be replaced with

\[ c_i'C_k = 0, \quad 1 \leq i \leq j, \quad 1 \leq k \leq j, \quad i \neq k, \quad \text{and} \]

4. Page 79. In the second line of the Initialization, the equation "$d_i = \alpha_{i0}$" should be
replaced with "\( d_i = a_{\alpha_{i0}} \)."

5. **Page 109.** In the line just prior to the statement of Theorem 4.5, "’Theorem 4.4 the model problem’" should replaced with "’Theorem 4.4 for the model problem’."

6. **Page 115.** In the third from last line in the proof of Theorem 4.8, "’\( \geq u'(b - Ax) \).’" should be replaced with "’\( = u'(b - Ax) \).’"

7. **Page 127.** In equation (4.42) (both lines) "’\( u_I \)’ should be replaced with "’\( u_i \)’.

8. **Page 132.** In the fourth line from the bottom of page 132, "’Example 4.6’" should be replaced with "’Example 4.8’.

9. **Page 133.** In the fifth line of the statement of Theorem 4.17, "’the gradients of linearly independent’" should be replaced with "’the gradients of those constraints active at \( x(b, c) \) are linearly independent’.

10. **Page 134.** In line 7 of paragraph 2, "’\( \hat{u} \) \( \hat{x} \) is strictly positive and \( a'_1 \hat{x} < b_i \)’" should
be replaced with "\(\hat{u}_1\) is strictly positive and \(a'_i \hat{x} < b_i,\)"

11. **Page 135.** In the line just before the first equation, ”the optimality conditions are” with ”the optimality conditions reduce to”

12. **Page 254.** Two lines below Equation (7.6), replace ”dropping constraint \(k\) from the active set.” by ”dropping constraint \(k\) from the active set, as was done in Algorithms 3 and 4.”

13. **Page 255.** Three lines above Assumption 7.1 change ”we set \(\gamma_j = 1\) if \(H_j\) is nonsingular and \(\gamma_j = 0\) if \(H_j\) singular.” to ”we set \(\gamma_j = 0\) if \(H_j\) is nonsingular and \(\gamma_j = 1\) if \(H_j\) singular.”

14. **Page 263.** In the proof of Lemma 7.1 Part (c) change the second line from last ”is in contradiction to \(e's \neq 0\)” to ”is in contradiction to \(e's_1 \neq 0\)”

15. **Page 264.** In the third line of the statement
of Theorem 7.1, replace ”$a'_i x = b_i, \ i = 1, \ldots, m$” with ”$a'_i x \leq b_i, \ i = 1, \ldots, m$”.

16. **Page 282.** In lines 1 and 2 of the statement of Lemma 7.2, replace ”nonsingular matrix. Let” with ”nonsingular matrix, $u$ and $v$ be $n$–vectors and let $\alpha$ be a scalar. Let”. Furthermore, in line 3 of the statement of Lemma 7.2(b), change ”$u, v, p$ and $q$ are $n$–vectors, and $\alpha$ and $\beta$ are scalars.” to ”$p$ and $q$ are $n$–vectors and $\beta$ is a scalar.”.

17. **Page 283.** In the first line of the proof of Part (c), replace ”Using (7.21) in (7.25)” with ”Using (7.25) in (7.21)”

18. **Page 286.** Fourth line from bottom, change ”$H_0 x - \lambda d$” to ”$H_0 x + \lambda d$”.

Furthermore, in the line just below change ”$x = \lambda H_0^{-1} d$” to ”$x = -\lambda H_0^{-1} d$”

19. **Page 288.** In the line just following Equation (7.43), change ”left-hand side of (7.40) is $H_0$ so that(7.40) becomes” to ”left-hand
side of (7.43) is $H_0$ so that (7.43) becomes”.

20. **Page 296.** In the line 5 lines prior to the statement of Procedure $\Psi_3$, replace the line

$$u = [e_q, d] \text{ and } v = [d, e_q].$$

with

$$u = [e_q, \tilde{d}] \text{ and } v = [\tilde{d}, e_q].$$

21. **Page 296.** On the second to last line of this page, change ”$i = 1, p$” to ”$i = 1, \ldots, p$”.

22. **Page 297.** Two lines above Example 7.7, change ”See Lemma 7.1(b) and Lemma 8.11(b).” to ”See Lemma 7.1(c).”

23. **Page 298.** Three lines prior to the end of Section 7.3, change ”using Procedure $\Psi_2.$” to ”using Procedure $\Psi_2.$ Note that when Procedure $\Psi_2$ is invoked, it could determine that $H_{j+1}$ would be singular In this case, it returns $w$ in the null space of $H_{j+1}$ and the first $n$ components (after normalization) of it satisfy the requirements of Step 1.2 for
Furthermore, in the following Step 2, the index of the new active constraint, $l$, is determined and we determine $K_{j+2}$ by replacing the column of $H_j$ containing $(a'_{k}, 0')'$ with $(a'_l, 0')'$. Procedure $\Psi_3$ does this by exchanging that column of $H_j$ with $(a'_l - a'_k, 0')'$. When we say ”column replacement”, we implicitly include the corresponding row replacement also.”

24. *Page 314*. In line 5, change ”components it follows” to ”components of $w$ it follows”.

25. *Page 314*. In the second equation from the top of the page, change ”$0_j$” to ”$0$”.

26. *Page 318*. In the fourth line from the top of the page, change ”$[ \gamma_{\beta_1 \beta_j} ]$” to ”$[ \gamma_{\beta_i \beta_j} ]$”.

27. *Page 331*. In the third line of the paragraph beginning with ”There are several consequences”, change ”$H_B$ has full row rank” to ”$B$ has full row rank”.

28. *Page 366*. In the 7th line from the top,
replace ”such that \( x_0 - s_0 \)” with ”such that \( x_0 - \sigma s_0 \)”.
Also in the first line of the paragraph beginning with ”Theorem 4.3 asserts” change ”and \( r = 0 \), then \( x_1 \)” to ”then \( x_0 \)”.

29. Page 367. In the second line from the bottom, change ”Theorem 9.2” to ”Theorem 9.1”.

30. Page 371. In the line immediately following Equation (9.11), change ”\( c_{\rho+1}, \ldots, c_n \)” to ”\( c_{\rho+1}, \ldots, c_n \)”.