Errata: Quadratic Programming with Computer Programs, by Michael J. Best, 2017.

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

"$c_i' C c_k = 0$, $1 \le i \le j$, $1 \le k \le j$, $i \ne k$,   and"

4. *Page 79.* In the second line of the Initialization, the equation "$d_i = \alpha_{\alpha_{i0}}$" 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, "$\hat{u}_1$ 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 "$a_i'x = b_i, \quad i = 1, \ldots, m$" with "$a_i'x \leq b_i, \quad i = 1, \ldots, m$".

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 α 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 α and β are scalars." to "p and q are $n-$vectors and β 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 "$H_0x - \lambda d$" to "$H_0x + \lambda d$".

    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 Ψ_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 Ψ_2." to "using Procedure Ψ_2. Note that when Procedure Ψ_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

s_{j+1}. 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 Ψ_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 "$c_{\rho+!}, \ldots, c_n$" to "$c_{\rho+1}, \ldots, c_n$".