Corrections

Integrated Methods for Optimization, 2nd ed.

J. N. Hooker

- *Page 241.* P should be defined $P = \{(x, y) \geq (0, 0) \mid Ax + By \geq b\}$ in Exercises 6.10 and 6.11.
- *Page 259.* Theorem 6.11 should state "... if and only if $b_0 \leq k$ and

$$\sum_{j<b_0} a_j + \sum_{j>k} a_j < a_0 \text{ "}$$

- *Page 269.* Replace v_i^* on line 8 with $v_i^* + f(\bar{x})$. Replace v_i^* with $v_i^* + f(x)$ in formulas (6.50) and (6.51). The last line of (6.51) should be

$$u^i(b - Dx) \leq B_i + M\delta_i, \quad i \in L_1$$

- *Page 270.* Replace 12 and 13 with $12 + 3x_1 + 4x_2$ and $13 + 3x_1 + 4x_2$, respectively, in the Benders cut and its linearized form. The solution of the second master problem is $z = 12$ with $(\bar{x}_1, \bar{x}_2) = (0, 0)$, not $z = 10\frac{1}{4}$ with $(\bar{x}_1, \bar{x}_2) = (0, 1)$. Because the previous subproblem has optimal value 12, the algorithm terminates with optimal solution $x = (0, 0)$, $y = (1, 0, 1)$.
- *Page 280.* Replace the second min in the formulas for U'_z and U'_x with max.
- *Page 281.* Replace "(6.70)–(6.72)" with "(6.73)–(6.75)" in Exercise 6.46.
- *Page 287.* Replace "element" in line 1 of (6.77) with "alldiff."
- *Page 308.* The entry for $b(3, b)$ in Table 6.3 should be 3, not 2.
- *Page 310.* Replace $r_{\text{front}(Q)j}$ with $\bar{r}_{\text{front}(Q)j}$ in line 8 of Fig. 6.17.
- *Page 347.* Replace $\gg$ with $\ll$ in Exercise 6.69.
- *Page 354.* Replace $e_J^* = \infty$ with $e_J^* = 0$ in line 3 of Fig. 6.30.
- *Page 388.* Immediately after Theorem 7.3, replace "C defines an odd hole" with "C defines an odd hole and contains all vertices of G."
- *Page 390.* Replace > 1 with < 1 in line 1 (Exercise 7.7).
- *Page 419.* Replace $d_1 - d_2 \geq -1$ just above the figure with $x_1 - x_2 \geq -1$.

- *Page 448.* Replace "Let x_j be" with "Let $x_j \geq 0$ be" in Exercise 7.50.
- *Page 469.* Replace $y \leq x_2^1 \leq 4y$ with $3y \leq x_2^1 \leq 5y$, and replace $3(1-y) \leq x_1^2 \leq 5(1-y)$ with $1-y \leq x_1^2 \leq 4(1-y)$, immediately below formula (7.149).
- *Page 491.* Replace "has no integrality gap" with "has an integrality gap" in Exercise 7.91.
- *Page 502.* Add domain $x_5 \in \{6\}$ to Exercise 7.102.
- *Page 519.* Change $f_j = s_j - p_j$ to $f_j = s_j + p_j$, 8 lines from bottom.