INTRODUCTION TO OPTIMUM DESIGN, Second Edition

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Errata Sheet

Page	Error/Correction	Reported By
x	3rd paragraph from top, last line; replace Igbal with Iqbal	
29	Line 6 from top; 1st constraint should read $-\sigma_1 \le \sigma_a$	N. Narayan
53	FIGURE E2-23: length of the beam should be l (m)	
61	Section 3.2.1; Include Mathematica command << Graphics 'Arrows' as first line of the code	Dr. J. Yang
70	Eq. (c) should read: $\tau = \frac{3V}{2bd}$	
73	Exercise 3.19; delete $6x$ in the second constraint	Y. Xiang
91	FIGURE 4-6; size of the gradient vector **c** should be its length	Dr. J. Yang
91	FIGURE 4-6: Equation of circle should be $f(x) = (x_1 - 1)^2 + (x_2 - 1)^2$	J. Choi
100	Eq. (a); in the second row, the first element should be 1 instead of 0	R. Williams
106	3rd line below Eq. (a); $x^* = 0$ should be $x^* = 2$	Dr. J. Yang
122	Figure 4-19: Lengths of vectors ∇h and ∇f should be $\sqrt{2}$	Dr. J. Yang
135	Second line from bottom: Change abd to and	Sang-Yub Lee
140	Section 4.4.4, Line 6: Change A5 to A4 and A8 to A7	Dr. J. Yang
140	Section 4.4.4, Line 7: Change B5 to B4 and B8 to B7	Sang-Yub Lee
140	Cell B10: Change s to x in the last term	Dr. J. Yang
141	Line 4: Change B5 to B4 and B8 to B7	Sang-Yub Lee
144	Line 2 in Theorem 4.7: insert "," between ")j"	Dr. J. Yang
161	Line below Eq. (h): Replace "case" with "cases"	Dr. J. Yang
167	Exercise 4.9: Second term should read as $4x_1 x_2$ in stead of $4x_1^2 x_2$	R. Sharma
169	Exercise 4.45: replace "Minimize" to "Maximize"	K. Rasing
171	Exercise 4.66: Second constraint should be "less than equal to" type: $x_1 - x_2 - 2 \le 0$	
176	Eq. (5.3) for feasibility check should also contain the equality constraints as $h_i(\mathbf{x}^*) = 0$, $i = 1$ to p; $g_j(\mathbf{x}^*) \le 0$, $j = 1$ to m	Jun Yang
176	EXAMPLE 5.1: The second constraint should read as $g_2 = x - 8 \le 0$	
197	FIGURE 6-1. Intersection of lines EH and GB should be labeled I	Dr. J. Yang
218	EXAMPLE 6.10: Replace $x_4 = 5$ with $x_4 = 6$ in **basic variables.**	Sang-Yub Lee
225	FIGURE 6-6. $x_1 + x_2 = 0$ should be $x_1 - x_2 = 0$	Sang-Yub Lee
239	In Paragraph a'_{rj} = element…Replace a'_{ij} with a'_{rj} at two places	

240	Equation (b) should read: $-\infty \le c_1 \le -1$	
245	FIGURE 6-12: Status of Constraint 2 should be Binding; it is an equality constraint.	Dr. J. Yang
254	Exercise 6.61: The first constraint should read $x_1 - 3x_2 \le -3$	
263	TABLE 7-1: Replace x_4 with x_5 in the Basic column of Third tableau	Sang-Yub Lee
270	Eq. (k) should read $-y_1 + 2y_2 - 2y_3 + y_5 = 2$	Dr. J. Yang
273	In Eq. (b), delete x_j.	Dr. J. Yang
288	Item 2 in Subsection 8.2.5: Replace $f(\alpha_a) < f(\alpha_b)$ by $f(\alpha_a) > f(\alpha_b)$	J. Yang
289	In the equation for $q = 3$ at the bottom of the page: Replace 1.168 with 1.618	N. Larson
291	FIGURE 8-9: Replace α_i' with α_l' as lower limit	Dr. J. Yang
292	TABLE 8-1, First column Phase 1 should read: 1 $\alpha = 0$ 2 $q = 0$ 3 $q = 1$ 4 $q = 2$	Dr. J. Yang
297	Step 5: Insert "+" in the argument for f as $f\left(\mathbf{x}^{(k)} + \alpha \mathbf{d}^{(k)}\right)$	Dr. J. Yang
297	In the last sentence of the paragraph below Eq. (8.22): Replace "the method" with "the conjugate gradient method"	Dr. J. Yang
307	Step 4(b): Replace $\ldots \overline{\alpha} \le \alpha^* \le \alpha_u$. with $\alpha_i \le \alpha^* \le \alpha_u$.	J. Yang
307	Step 4(b): Replace $\alpha_l' = \overline{\alpha}$. with $\alpha_l' = \alpha_i$ and $\alpha_i' = \alpha_i$ with $\alpha_i' = \overline{\alpha}$	J. Yang
307	Step 5(a): Replace $\alpha_l \le \alpha^* \le \alpha_i$. with $\overline{\alpha} \le \alpha^* \le \alpha_u$.	J. Yang
312	In Eq. (e): Delete ε	Dr. J. Yang
384	Eq. (11.13) should read as $s_i, u_i \ge 0 \ for \ i = 1 \ to \ m; \ x_i, \xi_i \ge 0 \ for \ i = 1 \ to \ n$	Dr. J. Yang
391	In line above Eq. (d): Replace "perimeter" with "parameter"	E. Danielson
391	In Eqs. (f): Replace "8800" with "8000"	E. Danielson
409	Second paragraph from bottom: Change $\mathbf{x}^{(k+1)}$ to $\mathbf{x}^{(k,1)}$ in line 3	
409	Second paragraph from bottom: Change $\mathbf{x}^{(k,1)}$ to $\mathbf{x}^{(k+1)}$ in line 4	
532	Line 10 from bottom: replace "represents" with "represent"	F. Goussous
596	EXAMPLE A.3: $(1 - 0.0075)^{120}$ in the equation should read $(1 + 0.0075)^{120}$	Nick Gaul
632	Eq. (c): Elements $a_{21}, a_{22}, a_{31}, a_{32}$ should be zero.	F. Goussous
634	TABLE B-1: Each iteration should contain four rows. Initial iteration shows 5 rows. Therefore, all the horizontal lines need to be moved up by one row.	
689	In **5.50**, Δf should be -800π m^3	

690	Answer for 6.34 should be $z^* = 10$	Nick Gaul
690	Answer for **6.71** should be $\mathbf{x}^* = (0,2), f^* = 4$	Rob Williams
690	Answer for 6.113: b_2 should be 4 instead of -4	Nick Gaul
691	Answer for 6.113: Δ_1 should be Δ_3 as: $-2 \le \Delta_3 \le 1$	Nick Gaul
691	Answer for 6.134: Change $c_1 = -1$ to $c_1 = 1$, and $c_2 = -4$ to $c_2 = 4$	Nick Gaul