

## **Corrections in the January 2015 version of “Case studies in Operations Research: Applications of Optimum Decision making”**

### **Correction in the Foreword**

PAGE vi

LINE 6 FROM BOTTOM: Change “  $50x_1 + 30x_2 + 20x_3$  ” to “  $0.50x_1 + 0.30x_2 + 0.20x_3$  ”

LINE 5 FROM BOTTOM: Change “  $45x_1 + 25x_2 + 30x_3$  ” to “  $0.45x_1 + 0.25x_2 + 0.30x_3$  ”

LINE 4 FROM BOTTOM: Change “  $30x_1 + 30x_2 + 40x_3$  ” to “  $0.30x_1 + 0.30x_2 + 0.40x_3$  ”

PAGE ix

LINE 19 FROM TOP: Change “  $Z_1, Z_3, Z_6, Z_4, Z_5, Z_2$  ” to “  $Z_2, Z_3, Z_5, Z_4, Z_6, Z_1$  ”

LINE 20 FROM TOP: Change “  $29 + 26 + 19 + 20 + 15 + 12 = 121$  ” to “  $10 + 26 + 21 + 20 + 14 + 33 = 124$  ”

### **Corrections in Chapter 3**

PAGE 43, LINE 2 FROM BOTTOM: Replace “partition node set  $N$ ” with “partition of the node set  $N$ ”

PAGE 55 , LINE 4 FROM TOP: Replace “in each state.” with “in each state).”

LINE 18 IN SECTION 4: Delete “Table 3.6, Table 3.7, Table 3.8” at the end.

PAGE 60: Add the following reference:

10. Details of 2014 General Elections in India, see: [http://eci.nic.in/eci\\_main/LibraryPublications/India%20Votes.pdf](http://eci.nic.in/eci_main/LibraryPublications/India%20Votes.pdf)

### **Corrections in Chapter 4**

PAGE 65, FIGURE 4.2: The downward arrow from “Milk Powder Production, Packaging, and Storage” to “Reconstituting Milk Powder into Liquid Milk” should be labeled as “Winter Season”.

### **Corrections in Chapter 5**

PAGE 93, SECTION 3.1.2, LINE 3: Replace “speciality of by completing” with “speciality, by completing”

PAGE 97, LINE 13 FROM BOTTOM: Replace “constant bin size method it is based on” with “constant bin size method, it is based on”

PAGE 99, LINE 8 UNDER FIG. 5.4: Replace “ G - A ” with “ G-A ”

LINE 9 UNDER FIG. 5.4: Replace “their - value” by “their  $X$  value”

PAGE 105, SECTION 7, LINE 6: Replace “ $(y_{i,1}, \dots, y_{i,16})$ ” by “ $(y_{1,i}, \dots, y_{16,i})$ ”.

### **Corrections in Chapter 8**

PAGE 172, BOTTOM TWO LINES: Replace these lines with

- If unit  $j$  is started up as a pump by using the cranking power provided by another unit of the same power station that works as turbine during the start-up maneuver, then no energy is consumed from the external network, and hence we have  $E_j = 0$  on input, but the water spillage used by the turbine must be considered;

## Corrections in Chapter 10

PAGE 210, SECTION 4.5, LINE 2: Change “ (1) to (6) ” to “ (10.1) to (10.6) ”

## Corrections in Chapter 13

PAGE 320, LINES 17-15 FROM BOTTOM: The terms “covered, uncovered wells” are defined in Page 318, Lines 16-13 from bottom.

PAGE 326, ALGORITHM 1: Here replace each equation number “  $(i)$  ” with “  $(13.i)$  ” for all  $i$ .

## Corrections in Chapter 14

PAGE 339, FIG. 14.3, and PAGE 340, LINES 1-3 UNDER FIG. 14.4: Figure 14.3 is reporting day-ahead electric power prices (\$0.10-0.60/kWh), which is the value of electricity produced during that time. Figure 14.3 reports electricity prices on a \$/kWh basis.

Page 340 reports the cost of TES and battery units. The \$6-43/kWh and 74-148/kWh are investment costs to install these units.

The costs mentioned in these two pages, even though they are measured in the same units, are not directly comparable because the cost in PAGE 340 is a capital cost, while the other is simply an electricity price.

PAGE 345, LINE 2 ABOVE SECTION 7.1: Replace “ TES ( $TES$ ) ” with “ TES ”

PAGE 346, LINE 4: Replace “ are diurnal in natural. ” with “ are diurnal in nature. ”

## Corrections in Chapter 16

PAGE 395, LINE 3 from bottom: Change “minimum spanning tree” to “shortest chain spanning tree”

LINE 2 from bottom: Change “algorithm. Our algorithm” to “algorithm (also known as the “Label setting method for shortest chains from a specified origin ”). Our algorithm ”

PAGE 397, LINE 1: Change “minimum spanning tree rooted at node 1” to “shortest chain spanning tree rooted at node 1 ”

PAGE 399, LINES 1, 2: Change “minimum spanning tree rooted at node  $j_1$ ” to “shortest chain spanning tree rooted at node  $j_1$  ”

LINE 5: Change “minimum spanning tree  $T_{j_1}$  ” to “ shortest chain spanning tree rooted at node  $j_1$ ,  $T_{j_1}$  ”

PAGE 400, LINE 11: Change “ minimum spanning trees ” to “ shortest chain spanning trees ”

PAGE 401, LINES 1, 2 in ITEM c.: Change “ minimum spanning tree rooted at the center ” to “ shortest chain spanning tree rooted at the center ”

ITEM d.: Change “ minimum spanning tree ” to “ shortest chain spanning tree ”

PAGE 406, LINE 5 from bottom: Change “ minimum spanning tree ” to “ shortest chain spanning tree ”

### **Corrections in Chapter 17:**

PAGE 424, TABLE 17.3: Insert “  $s_j$  = number of  $C_j$  components that a tangential strip will yield ” in a line under this table.

### **Corrections in Chapter 21:**

PAGE 502, LINE 2: Replace “ SIDSP reduces to ” with “ SIDSP is to ”

ITEM 2.: Replace “ If there are more than one requests ” with “ If there are two or more requests ”

PAGE 504, LINE 5 BELOW FIG. 21.7: Replace “  $[\ell_1, u_2]$  ” with “  $[\ell_1, u_1]$  ”

LINE 8 from bottom: Replace “intervals set ” with “ interval set ”

LINE 5 from bottom: Replace “ interval seats ” with “ interval sets ”

PAGE 505, LINE JUST ABOVE ITEM 1.: Replace “ to  $U$ .) ” with “ to  $U$ , i.e., it denotes replacing the content of  $U$  with the content of  $V$ ). ”

PAGE 508, ALGORITHM 1, LINE 10: Put text in brackets, i.e., replace this line with “ (While .... iterations): ”

END OF SECTION 3: Performance of some other algorithms for the DRPP is discussed in the new reference: Karapetyan, D., Mitrovic-Minic, S., Malladi, K.T., Punnen, A.P. Satellite downlink scheduling problem: A case study. Omega 53, 115–123, 2015.

PAGE 509, ALGORITHM 2, LINE 1: Omit the word “ with ”

ALGORITHM 2, LINE 3: Insert an “ . ” at the end of this line.

PAGE 512, LINE 1 BELOW TABLE: Replace “ computational result ” with “ computational results ”

### **Corrections in Chapter 22:**

PAGE 520, LINE 6 BELOW FIG. 22.2: Replace “  $(o, \sigma, t, \lambda)$  ” with “  $(o, \sigma, \omega, \rho)$  ” Also replace “  $t$  is ” at the end with “  $\omega$  is ”

LINE 7 BELOW FIG. 22.2: Replace “  $\lambda$  is ” with “  $\rho$  is ”

PAGE 527, LINE 7: Replace all three instances of “  $t$  ” with “  $s$  ”

PAGE 528: LINE 3 FROM BOTTOM: In formula (22.11) replace all three instances of “  $t$  ” with “  $s$  ”

PAGE 532, LINE 3 ABOVE SECTION 5: Replace “ cost coefficient.” with “ coefficient  $\lambda$  while  $\nu = 1$ . ”

LINE ABOVE SECTION 5: Replace “ cost coefficients. ” with “ coefficients  $\lambda$  and  $\nu$ .”

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