

## Errata in the Text

*An Introduction to Data Structures and Algorithms*, J. A. Storer, Birkhäuser / Springer

- Page 12, simpler computation:**  $O(n^2)$  should be  $O(k^2)$ .
- Page 20, 207, 218:** The 6<sup>th</sup> and 7<sup>th</sup> digits of  $e$  should be 81 not 18.
- Page 21:** In the first proof,  $\log_k(2)$  should be  $\log_2(k)$ .
- Page 93, Recursive approach:** Each item is a value or an operator (not a parenthesis).
- Page 96, inductive step (both places):**  $n>1$  should be  $n>0$ .
- Page 102, L2 (write statement):**  $x$  and  $y$  should be  $stack[top-2]$  and  $stack[top-3]$ .
- Page 131:** In the procedure LEV, "the root" should be  $v$ .
- Page 142, Line 6:** "from  $i$ " should be "from  $n$ ".
- Page 143, line 2:**  $T(i) \leq kn \log_2(n)$  should be  $T(i) \leq k \log_2(i)$ .
- Page 150, SPLIT( $d,T$ ):** Delete the phrase "Delete  $d$  and" and replace "detaching" with "detach".
- Page 165:** The second recursive call of arrayMSORT should be on  $m+1$ , not  $i+1$ .
- Page 170:** In the theorem statement, it should be  $\log_d(c)$ , not  $\log_c(d)$ . Also, it should be noted that the proof assumes  $b=1$ , since this does not change the asymptotic value of  $T(n)$ .
- Page 172, Idea:** In two places,  $w_1 \text{ L } w_m$  should be  $w_1 \dots w_m$ .
- Page 173, table:** It should be  $M[1,4]=A(B(CD))=2005$ ,  $M[2,4]=(B(CD))E=2,750$ , and  $M[3,3]=(CD)E=5,625$ .
- Page 181:** Proof is worded badly, delete "possibly not a leaf" and "the subtree rooted at".
- Page 224:, second lemma:** "height  $k$ " should be "height  $h$ " and  $k$  should be  $h$  on top of the sum.
- Page 246:** In both the figure and the **procedure** statement, it should be SPLIT( $d,T$ ).
- Page 250:** 12 and 13 should be exchanged in the right red-black tree.
- Page 252, Line 3:** "pre-order" should be "in-order".
- Page 253:** In the third figure, the left child of the root should be red.
- Page 279:** A's should be ACK's and  $A(4,m)$  should be  $ACK(4,n)$ .
- Page 299:** Assume  $u$  is in  $S$  when  $(u,v)$  is returned by DELETEMIN( $H$ ).
- Page 300, first line of algorithm:** "tree" should be "forest".
- Page 302:**  $P$  should be deleted from  $G$  in the second step, the inner *while* loop should ENQUEUE( $v$ ), and "at most 2" should be "0 or 2".
- Page 308, Example:** Delete "Not minimal".
- Page 310:**  $z:=0$  should be  $z:=\infty$ . Also,  $C$  should be  $F$  in the second *if* and both *else if* statements.
- Page 311:** This page has major errors.  $w$  should be  $v$  for the label of the fifth line,  $F(v,w)$  should be  $F(w,v)$  in the second MINIMUM statement, and in the complexity analysis,  $v$  should be  $w$  in the two lines after the *while* statement and  $C$  should be  $F$ . Also,  $z:=0$  is unnecessary, the statement " $z :=$  first component of  $v$ 's label (or  $\infty$  if  $v=s$ )" is missing after the Dequeue statement, and " $z :=$  first component of  $t$ 's label" is missing before the *while* loop in the complexity analysis.
- Page 325, bottom:** The sentence is reversed; it should be "... since the computational version is at least as hard as the yes-no version ..."
- Page 327, ND Acceptance:** "algorithm" should be "polynomial time algorithm".
- Page 328, TSP definition:** "tour" should be "Hamilton tour"; also, the graph must satisfy the triangle inequality (still NP-complete) for the algorithm to produce a simple cycle.
- Page 363:** " $S[i=m+j+1]=T[j+1]$ , but  $S[i+m-j] \neq T[j]$ " should be " $S[i-m+j+1]=T[j+1]$ , but  $S[i-m+j] \neq T[j]$ ".
- Page 374, ( $aa+bbb$ )\*:** Should be "strings made from pairs of  $a$ 's and triplets of  $b$ 's".
- Page 375, bottom figure:** The double arrow should be a single arrow from 4 to 1.
- Page 386, last paragraph:** "have size" should be "have depth"; delete "to  $O(n)$ ".
- Page 395, second for statement:**  $i$  should be  $j$ .
- Page 406, CHAR:** Not the usual MEMBER; go down (similar to INDEX) using COUNT fields of children.
- Page 426, Similarity:** Delete " $r^j$ ", it follows that" and put  $1/n$  in front of the left brace.
- Page 444:** First  $(n-1)$  should be  $(2n-1)$  in lower right entry of both matrices.
- Page 432, bottom figure:**  $F$  should be  $G$  and  $r^k$  should be  $r^{-k}$ .
- Page 452:** In Step 3, formula applies to the magnitude; also, in Step 5, "15 or more" should be "16 or more".
- Page 453, Step 4:** "inter" should be "intra" and the last sentence should note that both I and P may be out of order.
- Page 481, last paragraph:** Replace "0 through 9 in the leaves of" by "1 through 9 in".
- Page 491, equivalent algorithm:** Delete " $i$  is a multiple of  $k$  and".
- Page 500:** Algorithm line 5,  $X[r-1, i]$  should be  $X[r-1, \text{FLIP}(r,i)]$ ; also, figure rank 2 should all have  $x=4$ .
- Page 522-523:** For simplicity, we assume at most one wire per grid line, rather than  $O(1)$  per line.
- Page 523, last line:** " $wT$ " should be " $hT$ ".