

Errata

- p. 9, The final equation should be

$$= \sum_{k=1}^{n-1} k \binom{n}{k} t^k - \sum_{k=2}^n (k-1) \binom{n}{k-1} t^k.$$

(Ryan Obermeyer)

- p. 11, Worpitzky's identity as written here only holds for $n > 0$, not $n \geq 0$. (Dana Ernst's MAT 526 class at Northern Arizona University)
- p. 19, In the list of first several Catalan numbers, 132 should be between 42 and 429. (Michael Joseph)
- p. 25, The third line of the sequence of equations for $C(t, z)$ near the bottom of page should read

$$= 1 + z \sum_{n \geq 1} C_{n-1}(t) z^{n-1} + tz \sum_{n \geq 1} \sum_{i=0}^{n-2} C_i(t) z^i C_{n-1-i}(t) z^{n-1-i}.$$

(Dana Ernst's MAT 526 class at Northern Arizona University)

- p.31, The encoding of the path p in Figure 2.6 should be

$$p = (NNNEEE)(NNE)(NEE) \bullet (NNE)(NE)$$

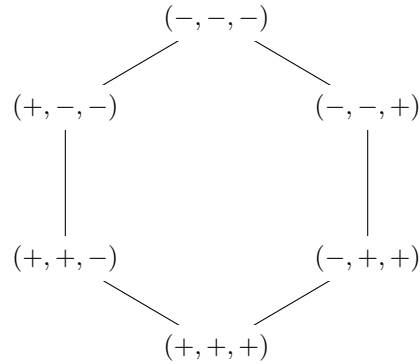
but the occurrences of NEE and NNE are reversed. This typo is also in all five elements in the equivalence class $[p]$ farther down the page. (Michael Joseph)

- p. 34, Figure 2.9 is incorrect. The Dyck path shown should map to the permutation 421395768. (Johann Cigler)
- p. 34, Beginning of Section 2.5. Here $PB(n)$ denotes the *set* of planar binary trees with n internal nodes, not the number of such trees. (Dana Ernst)
- p. 42, In Problem 2.10, the Motzkin paths should be paths from $(0, 0)$ to $(n, 0)$. (Ye Liu)
- p. 51, The second condition in the definition of P -partition should read $a(i) < a(j)$ if $i <_P j$ and $i >_Z j$ because the strict inequality $a(i) < a(j)$ is impossible when $i = j$. (Michael Joseph)
- p. 51, In the example following Lemma 3.1, the decomposition should read as follows:

$$\begin{aligned} \{a(1) > a(3) < a(2) \leq a(2) \leq a(4)\} &= \{a(3) < a(1) \leq a(2) \leq a(4)\} \\ &\cup \{a(3) < a(2) < a(1) \leq a(4)\} \\ &\cup \{a(3) < a(2) \leq a(4) < a(1)\}. \end{aligned}$$

(Ye Liu)

- p. 55, The example of a pair of shard intersections drawn in the middle of the page illustrates the relation $1|2|5|73|4|986 <_{\text{Sh}} 2|5|73|9861|4$, not $1|2|5|73|4|986 <_{\text{Sh}} 2|5|73|4|9861$, though both inequalities are true. (Dana Ernst)
- p.59, Near the top of the page, it should be “ $\sigma \vee \tau = \dots$ ” not “ $\vee = \dots$ ”. (Michael Joseph)
- p.63, In the set of equations at the top of the page, the product should have i ranging from 1 to n , not $n - 1$. (Michael Joseph)
- p. 65, In problem 3.3 part 2, it should say “Show that for fixed $k \geq 1$, \dots ”. (Michael Joseph)
- p. 73, The caption for Figure 4.1 should read: “The mountain range view of the permutation $w = 672841359$.” (Ye Liu)
- p. 97, In the equation at the top of the page, a subscript is missing. The right-hand side should be $[n]_q \cdot I_{n-1}(q)$. (Dana Ernst)
- p. 107, In Figure 5.7, two of the chambers are mis-labeled (the published figure uses the wrong ordering on entries in the sign vector). The proper figure is:



(Dana Ernst)

- p. 108, The first example of the third paragraph of Section 5.6 should be

$$37|45|126 \leftrightarrow \{x_3 = x_7 < x_4 = x_5 < x_1 = x_2 = x_6\}.$$

(Ye Liu)

- p. 108, In the paragraph preceding Proposition 5.4, it should say “We know that a face G is contained in a face F if, as set compositions, F is a refinement of G .” (Dana Ernst)
- p. 109, In row 8 of Table 5.3, there is a comma that need not be there. Also, the caption should read “The number of set compositions of n with $k + 1$ blocks.” (Dana Ernst)
- p. 137, The formula on the right-hand side of the equation just prior to Theorem 6.8 should be

$$\frac{1-t}{1-t \exp(z(1-t); q)}.$$

(Yan Zhuang)

- p. 152, In Figure 7.2, the vertex in the top right corner should be labeled $(1, 1, 1)$, not $(0, 1, 0)$. (Michael Joseph)
- p. 262, The third paragraph of Section 11.7 should refer to Section 11.7, not Section 11.6. (Dana Ernst)
- p. 362, In the example at the end of the solution to Problem 1.6, it should be $351246 \mapsto 426531$. (Dana Ernst)
- p. 363, In the example at the end of the solution to Problem 1.7, the permutation $w = 879631524$ has left-to-right minima of 8, 7, 6, 3, and 1, so the image of w under the bijection should be $(8)(79)(6)(3)(1524)$. (Dana Ernst's MAT 526 class at Northern Arizona University)
- p. 363, In the solution to Problem 1.8, the numbers s_j should be

$$s_j = |\{i < j : w(i) > w(j)\}|.$$

Also, the example permutation should be mapped to

$$589423761 \mapsto (0, 0, 0, 3, 4, 4, 2, 3, 8).$$

(Dana Ernst's MAT 526 class at Northern Arizona University)

- p. 387, In the solution to part 1 of Problem 3.4, the expansion of the product of sums has a plus sign at the end that should not be there. The expression ought to be:

$$(1 + z + z^2 + \cdots)(1 + z^2 + z^{2 \cdot 2} + \cdots) \cdots (1 + z^i + z^{2 \cdot i} + \cdots) \cdots.$$

(Dana Ernst)

- p. 399, In the solution Problem 3.11, the definition of u' should be $u' = w \circ u \circ w^{-1}$. (Dana Ernst)
- p. 417, In the solution to Problem 5.1, the inversion $(4, 5)$ is left out of the inversion set. (Dana Ernst)