ERRATA
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- page 5, line 9-. Insert “a” after “is”.
- page 23, line 6. Insert “a” after “is”.
- page 24, line 2. Change $c_i$ to $c_1$.
- page 34, line 15. It should be stated that for this second way, $d + 1$ cannot be inserted at the end even though $d \notin D(w)$.
- page 38, line 18. Change “does” to “do”.
- page 40, line 15. The intent of the parenthetical comment was to write the summation as

$$\sum_{g(4) \geq g(6)} \sum_{g(6) \geq g(3)} \cdots \sum_{g(5) \geq 0} q^{g(4)+\cdots+g(5)}.$$  

We are actually first summing on $g(5) \geq 0$, then $g(1) \geq g(5)$, etc.
- page 40, line 4-. Insert $\sum_{m \geq 0}$ before $\sum_{w \in S_d}$.
- page 43, line 4. Change “relection” to “reflection”.
- page 43, line 14. Change $i \geq 0$ to $i \geq 1$.
- page 45, line 1. Change $w$ to $T(w)$.
- page 47, line 11. Change $n \geq 2$ to $n \geq 1$.
- page 49, lines 20–22. The two sentence beginning “Figure 1.10 . . .” and “Let $f(n)$ denote . . .” should be interchanged, since $f(n)$ is used in the first of these sentences but defined in the second.
- page 50, line 4. Change “tree” to “trees”.
- page 53, line 1--. Change $n$ to $n - 1$.
- page 54, line 8. Change “number” to “numbers”.
• page 62, equation (1.78). Change $j \in S_i$ to $j \in S_i$.

• page 62, line 13-. Change $S_j$ to $S_i$.

• page 65, line 7. Change proposition to Proposition.

• page 66, line 13. Change $F(0,q)$ to $F(x,0)$.

• page 68, line 17-. Change “$k$ of the $\gamma_i$’s to “$k \gamma_i$’s”.

• page 71, line 2-. Change “then then” to “then the”.

• page 76, line 2. Change “$x$ to $-x$” to “$t$ to $-x$”.

• page 77, line 5-. Change “$f(0), f(0)$” to “$f(0), f(1)$”.

• page 85, Theorem 1.10.4, line 3. Change $GL(n, q)$ to $GL(m, q)$.

• page 85, Theorem 1.10.4, line 4. Change $|\lambda(f)| \cdot \deg(f)$ to $m = |\lambda(f)| \cdot \deg(f)$

• page 88, line 13-. Change $v_{ij}$ to $v_{ij}$.

• page 98, line 7. Change “in the monograph” to “is the monograph”.

• page 112, Exercise 55, line 2. Delete “, respectively”, since $\text{maj}(w^r)$ is expressed in terms of both $\text{des}(w)$ and $\text{maj}(w)$.

• page 113, Exercise 1.58(a), line 2. Change “and” to “can”.

• page 115, Exercise 70(b), line 3. Change (1,0) to (0,1), and change “i.e,” to “i.e.,”.

• page 120, Exercise 94, second bullet. Change “Then” to “The”.

• page 121, Exercise 96(c), line 3. Change 4.4.1.1 to 4.1.1.

• page 123, Exercise 116(b), line 2. Change distribuiton to distribution.

• page 126, line 2. Change $1 \leq i < j \leq n$ to “$1 \leq i \leq j \leq n$, excluding $(i,j) = (1,n)$.”

• page 126, Exercise 128(d), line 7. Change $\frac{x}{1+x}$ to $\frac{2x}{1+x}$.
• page 126, Exercise 129(a), line 3. Add \( \sum_{k \geq 0} \) after \( \sum_{n \geq 1} \).

• page 132, Exercise 160(c), lines 2,3. Change \( \xi \) to \( \zeta \).

• page 136, line 1. Change \( q^n \) to \( q^{k-1} \).

• page 137, Exercise 184(a), line 5. Change “polynomials \( f(x) = \beta \) for \( 0 \neq \beta \in \mathbb{F}_q \)” to “polynomial \( f(x) = 1 \)”.

• page 140, Exercise 198(b), last displayed equation. Change \( (q^{2m-1}) \) to \( (q^{2m-1} - 1) \) (twice).

• page 148, Exercise 56, line 3. Change = to \( \subseteq \).

• page 150, Exercise 22(b), line 6. Change \( x^{2i+1} \) to \( x^{2i-1} \).

• page 156, line 2. Change Combinatorica to Combinatoria.

• page 166, Exercise 91(d), line 4. Replace this line with

\[
1 + \sum_{n \geq 1} (-1)^n(x^{-n} - x^{n+1})q^{n(n+1)/2}.
\]

• page 166, Exercise 92. This identity is actually due to I. Gessel and D. Stanton, Trans. Amer. Math. Soc. 277 (1983), 173–201 (equations (7.13) and (7.15)).

• page 169, Exercise 109(a), line 4. Change “is bijection” to “is a bijection”.

• page 171, line 4. The index entries for these four names is missing.

• page 173, Exercise 129. Change the parts a and b to b and c.

• page 173, Exercise 134, line 2. Change the period after Petersen to a comma.

• page 181, Exercise 164, line 1. Change \( x = 0 \) to \( y = 0 \).

• page 190, Exercise 1.190(b), line 3. Replace this line with

\[
\omega^*(n,q) = q^n - q^m - q^{m-1} - q^{m-2} - \cdots - q^{[n/3]} + O(q^{[n/3]-1}).
\]
• page 195, line 9–. Change “example” to “examples”.

• page 196, equation (2.5). Change $Y \supseteq T$ to $Y \supseteq \emptyset$ or to just $Y$.

• page 198, line 2. This line should read:
  
  function $f_\leq$ satisfies $f_\leq(T) = f_\leq(T')$ whenever $\#T = \#T'$. Thus also $f_\geq(T)$

• page 199, line 11–. Change “i set” to “i-set”.

• page 199, line 3–. Change $S - T$ to $S_n - T$.

• page 200, line 8. Change $j \geq i$ to $j \leq i$.

• page 203, line 6. Insert ) before }.

• page 203, line 13. Change “nonatttacking” to “nonattacking”.

• page 203, line 4–. Change “is” to “in”.

• page 205, line 2–. Change $n - k - 1$ to $n - k + 1$.

• page 206, line 9. Change “suggest” to “suggests”.

• page 207, line 4–. Change $x - s_1$ to $x + s_1$.

• page 208, line 10–. Change “$a_3$’s” to “$a_3$ 3’s”.

• page 210, line 9. Insert “one for 121,” after “one for 112,”.

• page 210, line 9–. Insert = between $d(n)$ and $\#D_n$.

• page 212, line 9–. Change $T \subseteq S$ to $Y \subseteq S$.

• page 216, line 5–. Insert ) after $x_{\gamma}$.

• page 222, Exercise 10(b), lines 1 and 2. Change $E(n)/n!$ to $E(n)/n^n$ (twice).

• page 227, line 3–. On the left-hand side of the formula, remove one $\sum_{i \geq 0}$ and change $y'$ to $t'$.

• page 229, Exercise 29(a), line 4. Change “partitions” to “compositions”.
• page 235, Exercise 10(b), line 9. Change $E(n)/n!$ to $E(n)/n^n$.

• page 237, Exercise 19. Change $\binom{2n-k}{k}$ to $\frac{2n}{2n-k}\binom{2n-k}{k}$.

• page 237, line 2–. Change second $a_{n-k+1}$ to $a_{n-k+2}$.

• page 248, line 5–. Change “an” to “a”.

• page 249, Proposition 3.3.2, line 1. Change “condtions” to “conditions”.

• page 252, line 3. Insert “simple” before “matroids”.

• page 313, Figure 3.33. The poset $P_5$ is drawn incorrectly.

• page 277, line 12–. Change $\dim(W \cup W')$ to $\dim(W + W')$.

• page 283, lines 8– to 6–. Delete the sentence “Let $\Lambda_t = \{ s \in L(A) : s \leq t \}$, the principal order ideal generated by $t$.”

• page 284, line 3–. Delete “real” at the end of the line.

• page 284, line 2–. Insert “over $K$” after “arrangements”.

• page 285, line 11. Under the second $\Sigma$, change $B_1 \in A''$ to $B_1 \subseteq A''$

• page 249, Proposition 3.3.2, line 1. Change “condtions” to “conditions”.

• page 291, line 10–. Change “sketch that” to “reference for”.

• page 303, Theorem 3.15.8. To be completely accurate, one should assume that $P \neq \emptyset$.

• page 308, line 9. Change “an” to “and”.

• page 315, line 7. Change $a_s - a_{s+1}$ to $a_s - a_{s-1}$ (twice after the brace).

• page 317, after (3.80). The phrase “(since intervals of Eulerian posets are Eulerian)” is unnecessary since the formulas under consideration hold for any graded poset with $0$ and $1$.

• page 319, line 12–. Change $Q_1 \ast Q_2 \ast \cdots \ast Q_r$ to $R_1 \ast R_2 \ast \cdots \ast R_r$ (since $Q_i$ already has been given another meaning).
• page 319, line 11–. Change the first $Q_i$ to $R_i$.

• page 332, line 1–. Change $\gamma_{j-1}$ to $\gamma_j^2$.

• page 332, bottom of page. Add the following paragraph:

The proof that $(\gamma_j^*)^2 = 1$ is completely analogous. It also follows from the fact that $\gamma_j^2 = 1$, since we can assume without loss of generality that $j = p - 1$ and then apply the automorphism of $G$ that sends each $\tau_k$ to $\tau_{p-k}$.

• page 334, line 4. Change $z\delta$ to $z\delta_{p-1}$.

• page 336, line 11. Change $\varphi: \widehat{KP} \to \widehat{KP}$ to $\varphi: KP \to \widehat{KP}$.

• page 337, lines 14– to 11–. The sentence “For the algebraically minded . . . formal power series.” is not correct. We first need to consider non-commutative polynomials (not power series) and then pass to suitable completions.

• page 345, line 4. Change $p_{s-1} + p_s$ to $p_{j-1} + p_j$.

• page 345, line 13. Change $A$ to $A$ (boldface).

• p. 356, Exercise 15(g), line 3. Change 9655 to 11586.


• page 360, Exercise 38. This exercise is incorrect for $1 < k < m$, where $m$ is the maximum size of an antichain of $P$. A counterexample is given by $k = 2$ and $L = J(P)$, where $P = 1 + (1 \oplus (1 + 1))$. It is true that $\#P_k = \#R_k$, even for modular lattices. See Exercise 3.101(d).

• page 360, Exercise 41(c,d). It is assumed that $L$ is distributive.

• page 364, Exercise 55(b). The rating should be changed to [3–]. An exceptionally elegant proof was given by G. Stachowiak, Order 5 (1988), 257–259. Another elegant proof was given by B. Iriarte, arXiv:1405.4880. Iriarte proves the more general result that if $G$ is the comparability graph of a poset $P$, then the number of linear extensions of $(G, \sigma)$ is maximized when $\sigma$ respects the order $P$. 
• page 378, Exercise 114(a). The answer should be
\[(x - 1)(x - 2) \cdots (x - n).\]

• page 379, Exercise 115(c), line 1. Change “0,1” to 0. (There are \(\binom{n}{2}\) hyperplanes.)

• page 379, Exercise 116. The subscripts should not be in boldface.

• page 390, Exercise 158(a), line 4. Change a. at beginning of line to i.

• page 390, Exercise 158(a), line 5. Change b. at beginning of line to ii.

• page 390, Exercise 158(c). Delete one of the periods at the end of the line.

• page 390, Exercise 158(d), line 2. Change “thats” to “that”.

• page 405, line 8-. The notation \(f_{00}\) is not defined until the next sentence.

• page 407, Exercise 205(b), line 2. Change 44605 to 44606 (private communication from Patrick Byrnes, 21 February 2012). Byrnes originally assumed that a vertex \(v\) could be covered by at most one singleton (element covering only \(v\)), but there is exactly one example up to rank 9 where this property need not hold. Byrnes also computes that there are 29,199,636 1-differential posets up to rank 10.

• page 408, Exercise 215(c). Change the difficulty rating [5] to [3].

• page 431, line 2-. Change 23 to 33.

• page 449, Exercise 163(a), line 3. Change \(2e_P(p - 1) - (p - 1)e(p)\) to \((2e_P(p - 1) - (p - 1)e(P))/p!\).

• page 459, line 5-. Should be \(\beta_P(4,5,6) = -1\).

• page 469, line 6-. Change \(\sum_{n \geq 0} f(n)\) to \(\sum_{n \geq 0} f(n)x^n\).

• page 522, Figure 4.29. The vertex labels should be 0 and 1, not 00 and 10.

• page 528, Exercise 4.2, line 3. Change “over” to “in”.

• page 538, Exercise 114(a). The answer should be
\[(x - 1)(x - 2) \cdots (x - n).\]
• page 530, Exercise 4.12. Change 0.00010203050813213455\cdots to 0.0001010203050813213455\cdots, and change 1, 2, 3 to 1, 1, 2, 3.

• page 530, Exercise 4.14, line 2. Insert “relatively prime” after “choose \(a, b\)”.

• page 539, Exercise 47, line 1–. Change 1.1.8.6 to 1.8.6.

• page 542, line 10. Delete ) after \(u_6\).

• page 546, Exercise 4.75(d). Change the difficulty rating to [3–]. A combinatorial proof (though not a simple bijection) was found by Jacob Scott, private communication dated September 2, 2012.

• page 548, Exercise 2(a), line 6. The assertion “Clearly, we can write \(f(x) = P(x)/Q(x)\) for some relatively prime integer polynomials \(P\) and \(Q\)” is not so clear. One must show that if \(F(x) \in \mathbb{Q}[[x]]\) and \(F(x) = R(x)/S(x)\) where \(R, S \in \mathbb{C}[x]\), then one can write \(F(x) = P(x)/Q(x)\) where \(P, Q \in \mathbb{Q}[x]\). This statement does have a fairly simple proof, which we leave as an exercise.

• page 549, line 1–. Change \(x^{m^2}\) to \(x^{n^2}\).

• page 552, Exercise 14. The smallest known pair \((a, b)\) seems to be

\[
\begin{align*}
a &= 106276436867 &= 31 \cdot 3128272157 \\
b &= 35256392432 &= 2^4 \cdot 2203524527
\end{align*}
\]

due to M. Vsemirnov, *J. Integer Seq.* 7 (2004), article 04.3.7.

• page 558, line 1. Delete comma after *Wochenschrift*.

• page 558, Exercise 43. The sequence \(t(3), t(4), \ldots\) is known as *Alcuin’s sequence*, after Alcuin of York (730s or 740s – 19 May 804). For a survey see D. J. Bindner and M. Erickson, *Amer. Math. Monthly* 119 (2012), 115–121.

• page 560, Exercise 46(b), line 1. Delete the first “many”.

• page 560, Exercise 46(b), line 2. Change \(f(n+1), f(n+2), \ldots, f(n+d)\) to “\((f(n+1), f(n+2), \ldots, f(n+d))\) for fixed \(d\)”.
• page 564, Exercise 58(f), line 1. Change “order polynomials” to “Ehrhart polynomials”.

• page 567, Exercise 75(c), line 1. Delete “directed”.

• page 569, Exercise 80, displayed equation, line 1. Change $v'_i y$ to $v_i y$.

• page 571, line 3. Change “chose” to “chosen”.