ERRATA

for

*Algebraic Combinatorics*, second ed., Springer, 2018

(13 February 2020)

I am grateful to Benjamin Sambale for most of these corrections.

- page 6, line 10. Change $p(p-1)^{\ell}$ to $p(p-1)^{\ell-1}$.
- page 30, line 2. The right-hand side is missing a factor $1+x$. It should be
  $$\left(1+x\right)\left(\left(I_{p-1}-(x+1)M[v]\right)^{-1}T[v]\right)_u.$$ 
- page 36, Lemma 4.6. It should be noted that we set $U_{-1} = 0$ and $D_{n+1} = 0$.
- page 49, line 17–. It should be assumed that $m \geq 3$ in the statement that $G$ is isomorphic to $S_m$.
- page 70, proof of Theorem 6.14. It was not shown before that $M(n)$ is rank-symmetric, though this is immediate from the last line on page 68.
- page 83, Theorem 7.7, line 2. We should take $X$ to have $t$ elements, not $n$, since $n$ is used for the number of colors. In the proof on page 84 it is correctly assumed that $\#X = t$.
- page 95, line 5. Change $r$ to “at most $r-1$”.
- page 95, line 8. Change “at most $r$” to “at most $r-1$”.
- page 105, lines 15– to 14–. The letter $n$ is used in two different ways. We should let $\lambda \vdash m$, for instance.
- page 139, line 1–. Change the $(1,1)$ entry of $L(G)$ from 4 to 5.
- page 151, line 8–. Change $e_2$ to $v_2$.
- page 151, line 6–. Change $e_j$ or $e_i$. 
• page 151, line 5– (third bullet). This line is superfluous.

• page 173, line 18. Change $V_q = 1$ to $V_q = -1$.

• page 174, line 11–. Change $V_q = 1$ to $V_q = -1$.

• page 187, line 6–. We neglected to define (though hopefully the definition is obvious) the *dimension* of $\Delta$ to be the maximum dimension of a face of $\Delta$.

• page 194, line 10. Change “the set of” to “the set $Y$ of”.

• page 194, line 12. Change “$X =$” to “$Y =$”.

• page 194, line 1–. Change 13 to 12.

• page 198, Example 12.14(a). The $f$-vector should be $(4, 3)$, not $(3, 2)$. Hence line 3 becomes

$$(x - 1)^2 + 4(x - 1) + 3 = x^2 + 2x,$$

and the $h$-vector is $(1, 2, 0)$.

• page 204, line 7. Earlier there should have been defined the *Hilbert function* of $K[\Delta]$ by

$$H(K[\Delta], i) = \dim_K K[\Delta]_i.$$ 

• page 204, lines 9– and 7–. Change $j - 1$ to $j$.

• page 205, line 1. Change $k$ to $j$ (three times).

• page 210, line 18–. Change $d$ to $h_i$ (twice). Also, the notation $\beta_1, \ldots, \beta_{h_i}$ for both the concatenation of the sequences $b_j$ and the list of these sequences is confusing. It would be better to either delete the first $\beta_1, \beta_2, \ldots, \beta_{h_i}$ or to introduce new notation for concatenation, such as $\text{concat}(\beta_1, \ldots, \beta_{h_i})$. 