This list was last updated 19 June 2016.

The following are edits that apply to both the first hardcover printing (the version posted electronically on 18 October 2004, but no longer available electronically) as well as the first softcover printing:

Chapter 2

- page 35, proof of Lemma 2.25, line 1
  "The prove is" should be
  "The proof is"

Chapter 3

- page 43, proof of Proposition 3.2, line 2
  the exponent on y should be b_{i+1} instead of $b_i + 1$.
- page 45, line 4
  "$837,264$" should be
  "$837,609,264$"
- page 59, part (a) of Exercise 3.15, line 3
  "unviariate" should be
  "univariate"
- page 59, part (c) of Exercise 3.15
  the display should read

$$y^b m \;\mapsto\; \begin{cases} (b-1, x_j \cdot m) & \text{if every } m_i \text{ dividing } m \text{ is divisible by } x_j^a \\ (b, m) & \text{otherwise} \end{cases}$$

Chapter 4

- page 64, line -16
  "acylic" should be
  "acyclic"
- page 65, line 5
  "acylicity" should be
  "acyclicity"
- page 71, line 21
  The subscript $(1, ..., 1)$ on Delta should be a superscript
- page 72, line 1
  "$t \geq 1$" should be
  "$t > 1$"
- page 74, line 8
  "$t^{\mathbf{a}} \cdot \mathbf{v}$" should be
  "$t^{\mathbf{c}} \cdot \mathbf{v}$"
- page 76, Proof of Lemma 4.27, lines 7–8
  "The value of this inner product tends to n for $t \to \infty$. The inner product of w with $\mathbf{1}$ tends to 0 for $t \to \infty$."
  should be
  "The value of this inner product equals $w_1 + \cdots w_n + 1 = (w \cdot \mathbf{1}) + 1$."
- page 78, display in the middle of the page
  the exponent of x_ℓ should read $u_{\text{argmax}\{\sigma_j \setminus \sigma_{j-1}\}}$.

Chapter 5

- page 102, Definition 5.60 (i.e., line −4 of the page)
  "$p - q \geq i - j$" should be
  "$q - p \geq j - i$"
- page 104, line 11
  "interchange: namely" should be
  "interchange, namely"
- page 106, line 10
  "where the for subword complexes" should be
  "where the Hilbert series for subword complexes"
- page 106, line −9
  "Theorem 4.25" should be
  "Theorem 4.5"

Chapter 6

- page 122, Section 6.5, line 6
  "polytope" should be
  "polytopes"

Chapter 7

- page 132, line −7
  "t^{a_1}" should be
  "t^{a_i}"
- page 148, Exercise 7.17, line 3
  "an octahedron" should be
  "a triangular prism"
- page 131, Proof of Theorem 7.4, line 8
  "some $m > 1$" should be
  "some minimal $m > 1$"
- page 133, line −16
  "semigroups rings" should be
  "semigroup rings"
- page 142, line 15
  "Chapter" should be
  "Section"

Chapter 8

- page 150, line −13
  "for nonalgorithmic" should be
  "for a nonalgorithmic"
- page 154, Lemma 8.16
  There should be no □ at the end of the Lemma.

Chapter 9

- page 170, Example 9.5, line 2
  In the first row of the matrix, the fifth entry should be −1 and the eighth should be −2.

- page 171, line 21
  "multidgraded" should be
  "multigraded"

- page 175, line −5
  "$n \gg d$" should be
  "$n \sim d$"
- page 186, line 3
  The 1×3 matrix representing the map $S[L] \leftarrow S[L]^3$ should have the entries $\frac{z_3^2}{z_1 z_2^2} x_1 x_2^2 - x_3^2$, $\frac{z_2 z_3}{z_1^2} x_1 x_3 - \frac{z_3^2}{z_1 z_2^2} x_2^3$, and $x_2 x_3 - \frac{z_2 z_3}{z_1^2} x_1^2$.
- page 187, line 7
  "$x^u y^v - x^u y^v$" should be
  "$x^u y^v - x^v y^u$"

Chapter 10

- page 194, line −3
  "a finitely" should be
  "finitely"
- page 197, line 18
  "acylic" should be
  "acyclic"
- page 205, line 9
  "$P_{r\mathbf{a}}$" should be
  "$\mathcal{P}_{r\mathbf{a}}$" (calligraphic)

Chapter 11

- page 212, line 7
  "monomials" should be
  "monomial"
- page 212, line 10
  "ideals" should be
  "ideal"
- page 212, line −8
  "$Q \smallsetminus F$" should be
  "$\Bbbk\{Q \smallsetminus F\}$"
- page 214, line 2 of proof of Theorem 11.13
  "$\Bbbk\{\mathbf{a} + Q - F\}$" should be
  "$\Bbbk\{\mathbf{a} + F - Q\}$"
- page 214, line −13
  "$\Bbbk[\mathbf{a} + F]$" should be
  "$\Bbbk\{\mathbf{a} + F\}$"
- page 215, line −7
  "$k[Q]$" (subscript) should be
  "$\Bbbk[Q]$" (note font)
- page 223, line −6
  Wait until line −2 (after K is defined) to define "$J^{i+1} = E(N_Q) \oplus E(K)$"

Chapter 12

- Throughout Chapter 12
  The semigroup called "Q_{sat}" in this chapter, defined on page 230 to be $C \cap \mathbb{Z}^{1+d}$, need not equal the saturation (Definition 7.24) of the semigroup called "Q". For example, if $\mathcal{P}$ is a lattice simplex with normalized volume bigger than 1 but containing no lattice points other than its vertices (this can happen in dimension at least 3), then the lattice generated by Q has finite index in the lattice $\mathbb{Z}^{1+d}$ generated by $C \cap \mathbb{Z}^{1+d}$. It seems prudent, therefore, to change notation:
  "Q_{sat}" (all 21 occurrences) should be
  "$C_{\mathbb{Z}}$"
  (Only three of the 21 occurrences happen outside of Section 12.1: there is one on line -11 of page 238, and there are two in Exercise 12.1.) A number of consequent changes are required; they are listed individually, below.
- page 230, line 21
  "Although the cone C equals the convex hull of the semigroup Q generated by the lattice points $\{(1, \mathbf{a}) \mid \mathbf{a} \in \mathcal{P} \cap \mathbb{Z}^d\}$ in the copy of $\mathcal{P}$ "at height 1", the semigroup Q need not be saturated. Nonetheless, the semigroup ring $\Bbbk[Q_{\text{sat}}]$ for the saturation $Q_{\text{sat}} = C \cap \mathbb{Z}^{1+d}$ is a finitely generated module over the semigroup ring $\Bbbk[Q]$, by Proposition 7.25 and the finiteness of normalization [Eisenbud, Corollary 3.13]."
  should be
  "The cone C equals the convex hull of the semigroup Q generated by the lattice points $\{(1, \mathbf{a}) \mid \mathbf{a} \in \mathcal{P} \cap \mathbb{Z}^d\}$ in the copy of $\mathcal{P}$ "at height 1". The semigroup Q need not be saturated, and even if it is, it need not equal $C_{\mathbb{Z}} := C \cap \mathbb{Z}^{1+d}$. Nonetheless, the semigroup ring $\Bbbk[C_{\mathbb{Z}}]$ is a finitely generated module over the semigroup ring $\Bbbk[Q]$, by the proof of Theorem 7.16 (Gordan's Lemma)."
- page 231, Proof of Theorem 12.2, line 1
  "normalization $\Bbbk[Q_{\text{sat}}]$" should be
  "semigroup ring $\Bbbk[Q_{\text{sat}}]$"
- page 232, line 7
  "the semigroup Q is already saturated" should be
  "the semigroup Q equals $C_{\mathbb{Z}}$"
- page 245, Exercise 12.1, line 1
  "example of lattice polytope" should be
  "example of a lattice polytope"

Chapter 13

- page 258, Corollary 13.26, line 3
  "$H^i_{\mathfrak{m}}(\Bbbk[Q])_{\mathbf{b}} = H^i(\nabla_Q(\mathbf{b}); \Bbbk)$" should be
  "$H^i_{\mathfrak{m}}(\Bbbk[Q])_{\mathbf{b}} = H^{i+\dim \mathcal{P} - \dim Q}(\nabla_Q(\mathbf{b}); \Bbbk)$"
- page 259, Example 13.27, last two lines
  "$H^i_{\mathfrak{m}}(\Bbbk[Q])_{\mathbf{b}} = H^i(\nabla_Q(\mathbf{b}); \Bbbk) = \widetilde{H}_{1-i}(\nabla_Q(\mathbf{b})^\vee; \Bbbk)$ is therefore $\Bbbk$ if $i = 1$"
  should be

"$H^i_{\mathfrak{m}}(\Bbbk[Q])_{\mathbf{b}} = H^{i-1}(\nabla_Q(\mathbf{b});\Bbbk) = \widetilde{H}_{2-i}(\nabla_Q(\mathbf{b})^\vee;\Bbbk)$ is therefore $\Bbbk$ if $i = 2$"

- page 261, line −13
  "degee" should be
  "degree"
- page 269, Exercise 13.10, line 3
  The double "))" should be a single ")"

Chapter 15

- page 291, Example 15.4, lines 6 and 7
  Both subscripts "231" in line 6 should be "312".
  The subscript "312" in line 7 should be "231".
- page 297, line 13
  "$\tau_{i,i'}$" should be
  "$\tau_{i,i'}w$"
- page 297 proof of Prop. 15.23
  "ℓ" (all five instances) should be
  "n"
- page 306, line 20
  Insert a sentence: "So suppose $\sigma_i w < w$."
- page 307, line 20
  "$\partial_2\partial_1$" should be
  "$\partial_1\partial_2$"
- page 308, Exercise 15.5(a), line 2
  "$\sigma_k \cdots \sigma_2\sigma_1 v$" should be
  "$\sigma_{k-1} \cdots \sigma_2\sigma_1 v$"

Chapter 17

- page 332, line 4
  insert "in" after "ring"
- page 334, line −17
  "to a such" should be
  "to such"
- page 339, line 20
  "7×7" should be
  "8×8"
- page 339, line −10
  "7×7" should be
  "8×8"
- page 341, line −2
  "show" should be
  "shows"
- page 346, line −11
  "is complex" should be
  "is a complex"

Chapter 18

- page 359, Example 8.6, lines 6–12
  The equation for w isn't right; this text should be replaced by the following:

  $p = b - ad - ce, \quad q = ah + eg, \quad r = d - ag - bc, \quad s = cf + eg,$
  $t = f - de - acf + bce, \quad u = eh + afg - beg,$
  $v = h - bg - ach + adg, \quad$ and $\quad w = fg + ceh - deg.$

  Thus the affine chart U_{2+2} of the Hilbert scheme H_4 is also an 8-dimensional affine space with coordinates a, b, c, d, e, f, g, h.
- page 360, Example 18.9, line 7
  "$xy - t^2y^2$" should be
  "$xy - ty^2$"
- page 369, lines 16–21
  The two sentences starting "If $I = I_\lambda$ is a monomial ideal..." should be
  "If $I = I_\lambda$ is a monomial ideal then the tangent space has a basis consisting of $\mathbb{C}$-linear maps $I \to \mathbb{C}[\mathbf{x}]/I$ that take monomials to monomials or zero. The dual basis of the cotangent space consists of the equivalence classes of arrows as described for $d = 2$ in the proof of Proposition 18.14."
- page 369, line −7
  "if the points of $\lambda \in \mathbb{N}^d$ do not lie" should be
  "for most $\lambda \in \mathbb{N}^d$ that do not lie"
- page 370, Example 18.31, lines 6–8
  "$c_i y$" should be
  "$c_i z$" whenever 3 divides i
- page 370, Example 18.31, line 13
  The equation for d_2 should be
  "$d_2 = c_2c_{10} + c_3c_{13} - c_4c_5 - c_6c_7$"
- page 371, Example 18.33
  "102" (all three occurrences) should be "97"
  Sentence on line 4 should say, "Hence (18.12) is $23 \cdot 13 = 299 > 291 = 3n$."
- page 371, line 19
  "vectorspace" should be
  "vector space"
- page 377, line 1
  "is distinguished" should be
  "is a distinguished"

The following are edits for the hardcover printing (the version posted electronically on 18 October 2004, but no longer available electronically) that have already been corrected as of the first softcover printing:

Preface

- page vii, line −2
  "can seen" should be
  "can be seen"

Chapter 2

- page 29, line -5
  Switch the occurrences of "Γ" and "$k * \Delta$"
- page 30, line -3
  "Therefore $i < j$" should be
  "Therefore $i > j$"

Chapter 4

- page 75, line -2 of Example 4.23
  "this exampls" should be
  "this example"

Chapter 5

- page 101, two lines before Theorem 5.53
  Two occurrences of "Chapter 13.4" should both be "Section 13.5"
- page 101, definition of regularity
  "$\sum_{j=1}^{n} b_i$" should be
  "$\sum_{j=1}^{n} b_j$"

Chapter 16

- page 320, Lemma 16.22 should say the following:
  Given a face $L \in \mathcal{L}_w$, there is a sequence $L_0, \ldots, L_m$ of faces of $\mathcal{L}_w$ in which $L_0 = L$, the complement D_{L_m} is top-justified, and $D_{L_{e+1}}$ is obtained from D_{L_e} by either deleting a $+$ or performing an inverse chute.

Chapter 17

- page 342, line 9 in proof of Proposition 17.22
  "$\overline{X}_{\mathbf{r}}$" should be
  "$\overline{X}_{v(\mathbf{r})}$"
- page 344, displayed equation 5 lines before (17.10)
  "$\alpha = 1, \ldots, r_i$ and $\beta = 1, \ldots, r_j$" should be
  "$\alpha = 1, \ldots, r_j$ and $\beta = 1, \ldots, r_i$"
- page 348, line 4 (the line after the first displayed equation)
  "$\mathfrak{S}_v(\mathbf{t} - \mathring{\mathbf{t}})$" should be
  "$\mathfrak{S}_{v_*}(\mathbf{t} - \mathring{\mathbf{t}})$"
- page 352, Exercise 17.17
  "the length $l(v(\mathbf{r}))$ of its Zelevinsky permutation" should be
  "the difference $l(v(\mathbf{r})) - l(v_*)$"