

Errata and Addenda
for “Algebraic Invariants of Links” (second edition)

7 May 2024

page 30, lines 17-18: “homomorphism . . . $c(m_1, m_2)$ ” should read “function

$Ad(c) : M_2 \rightarrow Hom_R(M_1, N)$ given by $Ad(c)(m_2)(m_1) = c(m_1, m_2)$.”

page 32, line 18: “from $H^{q+1}(X; \Lambda_\mu)$ ” should be “from $TH^{q+1}(X; \Lambda_\mu)$ ”.

Note also that if we localize at a principal prime then all of these homomorphisms become isomorphisms.

page 49, line 20: “principal ideals” should be “principal fractional ideals”.

The assertion “ $\widetilde{I}_S = (\widetilde{I})_S$ ” on line 21 follows from the equation $\widetilde{I} = [R : [R : I]]$, for I a finitely generated fractional ideal in a noetherian domain R . See Proposition V.1.1 of [Bou]. (My thanks to Jun Ueki for pointing out these slips and those on pages 56 and 57.)

page 56, line -3: We should assume here that R is an integrally closed noetherian domain and M is finitely generated.

page 57, line 9: “rank r ” should be “rank q ”.

page 75, line 6: “3.17” should be “3.16”.

page 79, line -9: delete the fullstop after “ $H_2(X, \Lambda_\mu)$ ”.

page 91, line 4: “Chapter 6” should be “Chapter 7”.

page 122, line 9: “ $V_{=+1}(L)$ ” should be “ $V_{i+1}(L)$ ”.

Theorem 5.21, part (1): “ $\mu \leq 2$ ” should be “ $\mu = 1$ ”,

and “ $\mu > 2$ ” should be “ $\mu \geq 2$ ”.

page 136, line 16: “ $\delta_1(K)$ ” should be “ $\Delta_1(K)$ ”.

page 155, line 10: insert “ K_0, \dots, K_s and” after “choose”.

Theorem 7.12 **needs attention**. See also [Co18], [FP17].

Theorem 10.2 overlaps with Theorem 7.2.

page 177, line -11: “ $\Lambda_2(L)$ ” should be “ $\lambda_2(L)$ ”.

page 187, line-4: “ $\delta\beta^{-1}x\beta\delta^{-1}x^{-1}$ ” should be “ $a^{-1}\gamma^{-1}\theta\varepsilon\theta^{-1}\gamma a\delta\beta^{-1}x\beta\delta^{-1}x^{-1}$ ”.

page 227, line 14: “ R ” should be “ $\mathbb{C}[[t]]$ ”.

page 272, line -13: replace “in higher dimensions” by “in all odd dimensions”.

page 275, line 9: “a generator . . . R ” should be “and generates a summand . . . R^2 ”.

page 278, line -11: Delete “See [Rob]”, since [Rob] does not discuss the rational central series.

page 282, line -11: “1-cycles $Z_1(\widetilde{X})$ ” should be “0-cycles $Z_0(\widetilde{X})$ ”.

page 292, line 12: “polyclic” should be “polycyclic”.

In several places “ Z ” or “ Z^μ ” should be “ \mathbb{Z} ” or “ \mathbb{Z}^μ ”, respectively:

page 24, line 13; page 79, line 8; page 158, line -8; page 249, line 2;

page 260, line -6.

[CCMP12] has appeared in *Symmetry* 4 (2012), no. 1, 129–142.

[Ki07] has appeared in *Internat. J. Math.* 26 (2015), 1550077+.

[Le10] has appeared in *Comment. Math. Helv.* 89 (2014), 719–757.

See also

- [Co18] Conway, A. An explicit construction of the Blanchfield Pairing for arbitrary links, *Canad. J. Math.* 70 (2018), 983–1007.
- [FP17] Friedl, S. and Powell, M. A calculation of the Blanchfield pairing of 3-manifolds and knots, *Moscow Math. J.* 17 (2017), 59–77.
- [Li21] Livingston, C. Intrinsic symmetry groups of links,
arXiv: 2110.03502 [math.GT].