ERRATA TO THE ARTICLE "ON COMBINATORIAL LINK FLOER HOMOLOGY"

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p.3: In the formula (3), by n_i we mean the cardinality of $\mathbb{O}_i$ (or of $\mathbb{X}_i$).

p.10: Proposition 2.12 does not follow immediately from Lemma 2.11; we need a more involved argument. Let us settle for proving that the filtered quasi-isomorphism type of $C^-(G)$ is independent of the ordering. Suppose we have a different ordering, where the marking O_i is what previously was O_k (another marking on the same link component). Without loss of generality, we can assume that O_i and O_k are related as in the proof of Lemma 2.11, i.e., there is a marking X_j on the row of O_i and the column of O_k. We seek to show that $C^-(G)$, as a complex over $\mathbb{F}_2[U_1, \dots, U_\ell]$, is filtered quasi-isomorphic to itself when U_k takes the role of U_i.

Let us consider $C^-(G)$ as a dg module over the dg algebra

$$\mathcal{A} = \mathbb{F}_2[U_1, \dots, U_\ell, U_k, H]/(dU_1 = \dots = dU_\ell = dU_k = 0, dH = U_i - U_k),$$

where H is the operator defined in the proof of Lemma 2.11. Then $C^-(G)$ is filtered quasi-isomorphic to a free module over $\mathcal{A}$ (by, for instance, the bar resolution). But the free module $\mathcal{A}$ itself is quasi-isomorphic to

$$\mathbb{F}_2[U_1, \dots, U_\ell, U_k]/(dU_1 = \dots = dU_\ell = dU_k = 0, U_i = U_k).$$

On that module, the actions by U_i and U_k are actually the same. It follows that the same is true for the bar resolution and hence for $C^-(G)$, up to filtered quasi-isomorphism.

p.24 line 7: Here, by $O_i(p)$ we denote the number of O markings on the ith component of the link that appear in p (counted with multiplicities). This is in contrast to the rest of the paper, where $O_i(p)$ counts the multiplicity of a single marking O_i.

The rest of that paragraph would benefit from more details, which we provide here. To justify that $\#(Q \cap p) = \#(Q \cap p')$, observe that the difference of p and p' (as a two-chain) is a periodic domain on the grid with $X_i = O_i = 0$. Let P be the space of periodic domains. This is $(2n-1)$-dimensional, generated by the rows and columns, with a relation that the sum of the rows equals the sum of the columns. The kernel of the map

$$P \to \mathbb{Z}^\ell, \quad p \mapsto O_i(p) = X_i(p), \ i = 1, ..., \ell,$$

is spanned by differences of the form $T - T'$, where T and T' are either rows or columns (or possibly one is a row and one is a column) supporting the same component of the link. All such differences satisfy $\#Q(T - T') = 0$, so the claim follows.

To define the filtration $\mathcal{F}$, pick some generator $\mathbf{x}$, set $\mathcal{F}(\mathbf{x}) = 0$. For any other generator $\mathbf{y'} = U_1^{k_1} U_2^{k_2} .. U_n^{k_n} \mathbf{y}$, define its filtration level by choosing a domain p from $\mathbf{x}$ to $\mathbf{y}$ with $O_i(p) = k_i$ for all i, and setting $\mathcal{F}(\mathbf{y'}) = \mathcal{F}(\mathbf{x}) - \#(Q \cap p)$.

p.49: In Proposition 5.5, the right hand side of the displayed equation should have the superscript (Maslov degree) of $\widehat{HL}$ be $2S - d + 1 - \ell$ instead of $2S - d$. In the proof, when we rotate the diagram by 90 degrees the Alexander and Maslov gradings change by:

$$A_i(\phi(x)) = -A_i(x) - (n_i - 1), \quad M(\phi(x)) = -M(x) - (n - 1).$$

The result follows from Propositions 2.15 and 5.3.

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