1176-57-149 Jonathan Hanselman* (jh66@math.princeton.edu). On immersed (1,1)-diagrams.

An immersed (1,1)-diagram is a pair of decorated immersed multicurves in a torus with two marked points. Given such a diagram, Floer homology of the two multicurves defines a bigraded complex over F[U,V]. Conversely, we can show that any bigraded complex over F[U,V] can be realized by a (1,1)-diagram of a particular form, in which one multicurve is fixed and the other can be viewed as an immersed multicurve in a singly marked torus. In particular, the knot Floer complex of a knot can be represented by such an immersed (1,1)-diagram, or equivalently by an immersed multicurve in a marked torus; this representation is unique up to homotopy of the multicurve (and some notion of equivalence on decorations). An interesting case to consider is that of a (1,1)-knot, which by definition admits an embedded (1,1)-diagram (that is, a genus one doubly pointed Heegaard diagram) as well as an immersed (1,1)-diagram representing knot Floer homology. In many cases different diagrams with the same Floer homology can be related diagrammatically, allowing us to compute the immersed curve representing the knot Floer complex from the embedded (1,1)-diagram without needing to compute the complex. (Received January 20, 2022)