

Constructing CW complexes from grid diagrams

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Given a knot presented in a grid diagram, we construct a CW complex which has one cell for each generator of the grid chain complex and whose attaching maps correspond to the chain complex boundary map. Thus the homology of this space is the knot Floer homology. We will show that the stable homotopy type of this CW complex is actually a knot invariant.

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Columbia University