

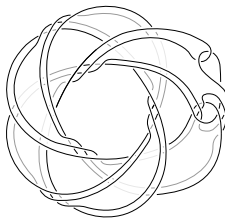
Khovanov homology and surfaces in the 4-ball

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Low-dimensional Topology Seminar

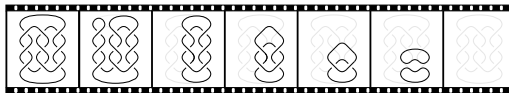
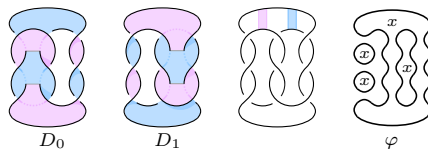
22 September 2022



Example 1

Proposition (S.-Swann 20, Hayden-S. 21)

The knot 9_{46} bounds a pair of slice disks $D_{0,1}$ distinguished up to boundary-preserving isotopy by their maps on Khovanov homology.

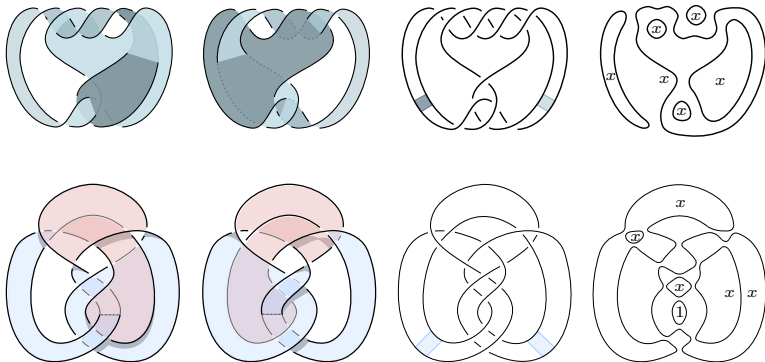


$$\text{Kh}(D_1)(\varphi) : \text{Diagram 1} \rightarrow \text{Diagram 2} \rightarrow \text{Diagram 3} \rightarrow \text{Diagram 4} \rightarrow \text{Diagram 5} \rightarrow \text{Diagram 6} \rightarrow 1$$

Example 2

Proposition (Hayden-S. 21)

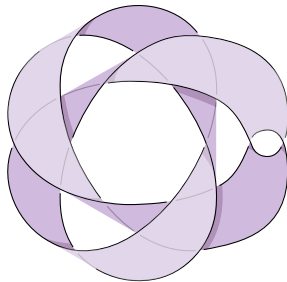
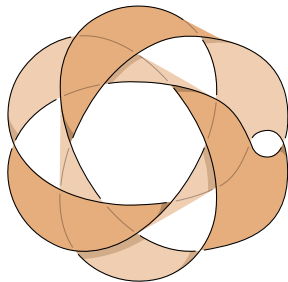
The knots $15n_{103488}$ and $17nh_{73}$ bound slice disks distinguished up to boundary-preserving isotopy by their maps on Khovanov homology.



Non-isotopic Seifert surfaces in B^4

Theorem (Hayden-Miller-Kim-Park-S. 22)

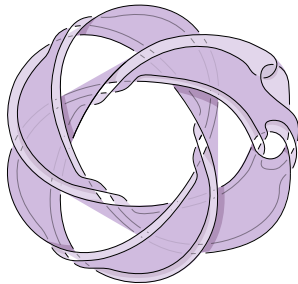
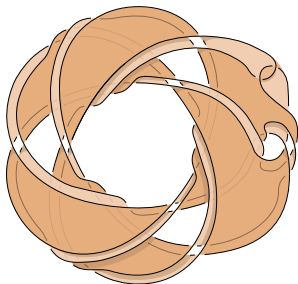
There are knots bounding pairs of non-isotopic Seifert surfaces, which remain non-isotopic when pushed into B^4 .



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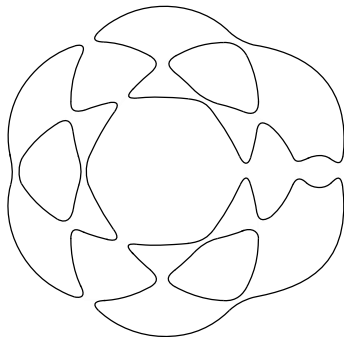
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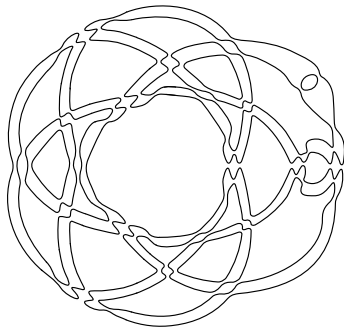


(All x labels)

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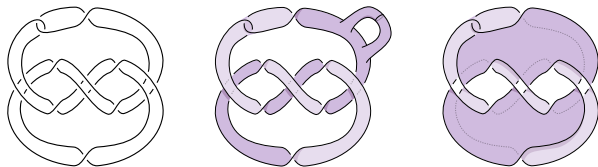


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