Looking at Extreme Khovanov Homology

Gabriel Montoya-Vega

University of Puerto Rico at Rio Piedras

The concept ofadequate links, initially introduced by Lickorish and Thistlethwaite as a generalization of alternating links, has garnered increasing attention from knot theorists, particularly in the context of Khovanov homology. A diagram is said to be Khovanov-adequate if its corresponding Khovanov chain complexes exhibit non-trivial homology at both the maximal and minimal quantum gradings, which represent extreme levels of the quantum grading spectrum. These non-trivial homology groups are crucial for understanding the topological features encoded by the diagram. In this talk we delve into the notion of Khovanov adequacy within the framework ofindependence complexes, a tool that has proven valuable in understanding the structure of Khovanov spectra.

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