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FlatKnotInfo: A Table of Flat Knots

Flat knots (aka virtual strings) are homotopy classes of immersed curves on surfaces up to stabilization. They naturally arise in studying unknotting operations applied to virtual knots. By work of Turaev, Hass and Scott, and others, there is a known algorithm for classifying flat knots, and in this talk I will present the results of implementing the algorithm on the set of flat knots with up to eight crossings. In prior work, Gibson had classified flat knots up to four crossings, and I will discuss the invariants that were most helpful in distinguishing the flat knots, their symmetry type, and questions about concordance and sliceness. I will also showcase a web-based tool called FlatKnotInfo that gives users access to a table of flat knots and their invariants. This talk represents joint work with L. White.