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Polynomial Knot Invariants and Skein relations

Abstract. Skein relations provide a tool for studying properties of knots and links, and are particularly useful in computations of their polynomial invariants; many of those were defined by skein relations. We will describe a knot polynomial in four variables using the standard skein theory. The resulting invariant is some refinement of the HOM-FLY polynomial, and is slightly stronger. In the talk we will present also some historical background, methods of computations as well as remarks related to skein theory.