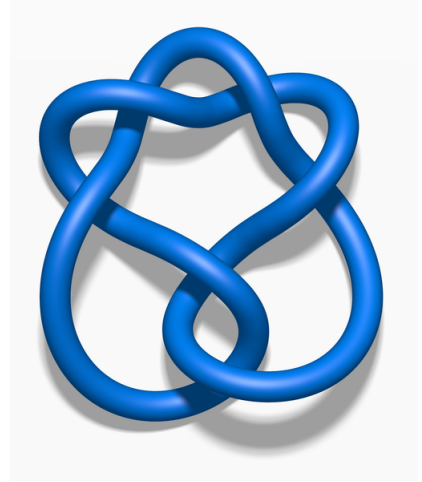


Oberseminar Geometrie
Department of Mathematics
University of Fribourg
Physics 2.52
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LEVI RYFFEL (UNIBE)

Two strand twisting

We consider two families of moves on links called t_m - and \bar{t}_m -moves. Building on work done by Przytycki, we prove that fibred knots cannot be untied with \bar{t}_{2k} -moves for any $k \geq 2$. More generally, we give an upper bound on the number of two strand twist operations that allow to untie a knot with non-trivial HOMFLY polynomial, in terms of the minimal crossing number, and the braid index. Moreover, we prove that the braid index of a two-bridge knot cannot be lowered by applying t_{2k} -moves, for all but finitely many k , and will see more precise results in the special case of twist knots and two strand torus knots.

This is joint work with Lambert A'Campo, Sebastian Baader, and Livio Ferretti.