

A characterisation of the trivial knot using special symmetries

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I will present a joint work with Michel Boileau giving a characterisation of the trivial knot: the trivial knot is the only knot admitting more than two symmetries of a very specific type. The proof of this fact is based on work of Sakuma on symmetries of knots and on an analysis of the behaviour of cyclic branched covers of knots. This characterisation is exploited in a crucial way in the proof of two other results, one in collaboration with Boileau, and the other with Boileau and Zimmerman.