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Knots, groups, subfactors and physics*

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Abstract. Groups have played a big role in knot theory. We show how subfactors (subalgebras of certain von Neumann algebras) lead to unitary representations of the braid groups and Thompson's groups F and T. All knots and links may be obtained from geometric constructions from these groups. And invariants of knots may be obtained as coefficients of these representations. We include an extended introduction to von Neumann algebras and subfactors.

Keywords and phrases: subfactors, planar algebras

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