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Title: Planar algebra of Bisch-Haagerup subfactors

Abstract: We describe the planar algebra, or equivalently, the standard invariant, of the subfactor $P^H \subset P \rtimes K$ arising from outer actions of two finite groups H and K on a II_1 -factor P . These subfactors, introduced by Bisch and Haagerup, play an important role in the theory providing a very simple mechanism to construct irreducible subfactors whose standard invariant has infinite depth. The planar algebra heavily depends on the cocycle arising as an obstruction to lifting the subgroup G in $Out(P)$ generated by H and K . If we assume that the group generated by H and K in $Aut(P)$ intersects trivially with $Inn(P)$, (equivalently, the obstruction is trivial), then the planar algebra has an interesting similarity with IRF models in Statistical Mechanics. This is a joint work with Dietmar Bisch and Paramita Das.