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Title: Representations of the Braid Group via a Bell State Matrix

**Abstract:**

In recent work of Dye, a unitary solution of the Yang Baxter Equation appears which Kauffman and Lomonaco have shown (together with local unitary transformations) is universal for quantum computing. This solution can be used to obtain representations of the braid group. In particular, I will discuss results with Rowell and Wang identifying the image of the representations and the corresponding link invariants.