

Cobordism hypothesis and three-dimensional TQFTs

As a concrete example to which the cobordism hypothesis applies, one can mention the 3-dimensional TQFT of Turaev and Viro. This theory constructs a TQFT from a given spherical fusion category. In fact, a spherical fusion category gives rise to a 3-dimensional TQFT because it determines a fully dualizable object in a certain 3-category. In this talk I will explain this construction, and, time permitting, I will also touch on the Witten–Reshetikhin–Turaev theory and the Crane–Yetter theory.

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