Graphs, tensor categories and subfactors: some analytic aspects

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The talk starts by a discussion of two wide open questions: which rigid C*-tensor categories "come from" a hyperfinite subfactor and which rigid C*-tensor categories "are equal to" the category of finite index bimodules over a II$_1$ factor. Because progress on these questions has been scarce, we need more test families of nonamenable rigid C*-tensor categories. I then present such a family constructed in joint work with Lukas Rollier and related to quantum automorphism groups of connected locally finite graphs.