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Syracuse, NY 13244-1150. *Odd annular Bar-Natan category and $gl(1,1)$.*

Around 2013, Putyra introduced a category of chronological cobordisms, which generalizes Bar-Natan's cobordism category, and which can be used to recover odd Khovanov homology. In this talk, I will first describe an annular version of Putyra's odd chronological cobordism category. I will then construct an explicit functor relating this category to a dotted version of the odd Temperley-Lieb supercategory at $\delta = 0$. Finally, I will present two different proofs showing that this functor is, in fact, an equivalence. This equivalence is noteworthy because it leads to a natural interpretation of the fact that odd annular Khovanov homology carries an action of the Lie superalgebra $\mathfrak{gl}(1|1)$. Moreover, our methods extend to the even setting, where they lead to new proofs of a result by Russell.

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