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Title: "The SYK model and random tensors"

The SYK model involves N Majorana fermions in $1+0$ dimensions with quenched Gaussian disorder that proves to be exactly solvable in the large N limit at strong coupling. It has been initially proposed by Sachdev and Ye as a model of condensed matter and later gained some interest as a toy model of AdS/CFT correspondence, thanks to the work of Kitaev. On the other side, random tensors are generalisations of random matrices to objects that carry more than two indices. It turns out that the SYK model and random tensors involve a special class of Feynman graphs known as "melons". We will briefly review both constructions.

Then, we will show how non Gaussian disorder can be reduced to a Gaussian one, treating the coupling as a random tensor, thanks to Gurau's Gaussian universality result. This last part is based on <https://arxiv.org/abs/1812.03008>.