Abstract Submitted
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Multi-scale entanglement Renormalization Ansatz and chiral topological phases ZHI LI, ROGER MONG, Univ of Pittsburgh — We considered the question of applying the multi-scale entanglement renormalization ansatz (MERA) to describe chiral topological phases. We rigorously proved a theorem showing the trade-off between the number of orbitals per cell (which roughly corresponds to the bond dimension) and the correlation length. An interesting corollary is that the bond dimension should grow with the height. Specifically, we established a No-Go theorem stating that we won't approach a renormalization fixed point if we restricted the bond dimension.

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