Optimizing tensor network structure

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Abstract:
In physics, Tensor networks (TN) have proven to be useful for a variety of problems. One such example is the TN state, which is a highly effective variational function for ground states that have low entanglement. Recently, the power of TN representation has also been applied to machine learning problems. However, in many applications of TNs, the network structure is fixed and serves as an ansatz. In this talk, I will discuss methods for automatically optimizing the network structure to solve ground-state calculations and generative modeling problems.