

Automatic Structural Search of Tensor Network States including Entanglement Renormalization



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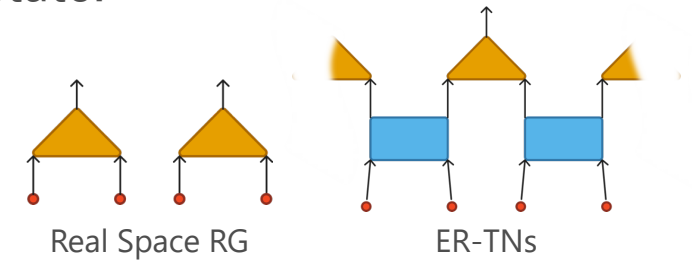
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- **Topic : Preparing a proper Tensor Networks (TNs) for variational algorithms**

- It is also used to visualize the entanglement structure of the given TN state.

- **Target : TNs includes Entanglement Renormalization**

- It is hard to handle numerically because of loops in their structure.



- **Method : Local reconstruction to minimize the variational energy**

- Incorporating some heuristics such as the idea of heat bath and replica exchange.

- **Results**

1. Heuristics are necessary for capturing many-body entangled structure while avoiding local minima.
2. Our method could improve accuracy both of fidelity and entanglement entropy to the target states.