Ti*k*Z tensor network diagrams

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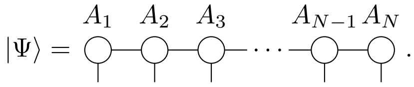
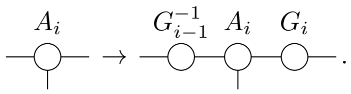
7 February 2025

Finite MPS:



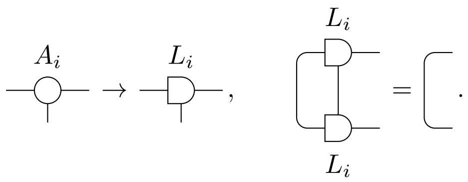
(1)

Gauge transform:



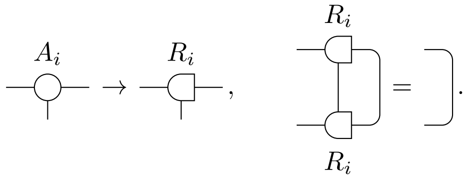
(2)

Left-orthogonal form:



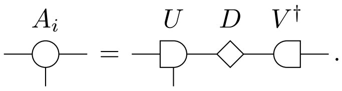
(3)

Right-orthogonal form:



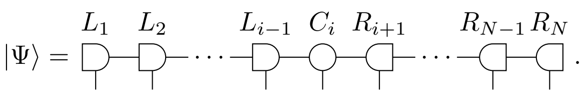
(4)

SVD:

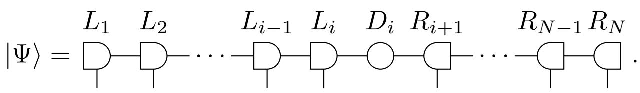


(5)

Mixed-canonical form:

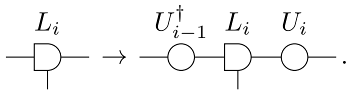


(6)



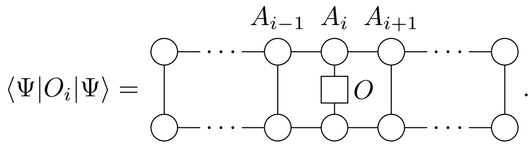
(7)

Unitary gauge transformation:

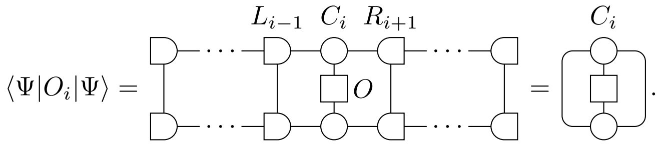


(8)

Expectation value:

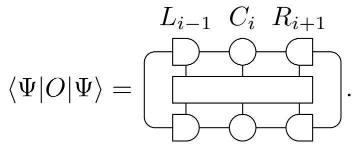


(9)



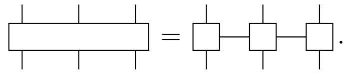
(10)

Multi-site expectation value:



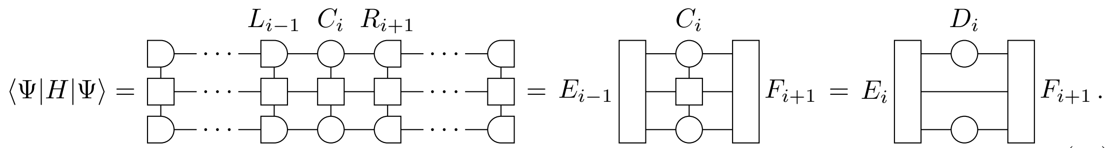
(11)

MPO:



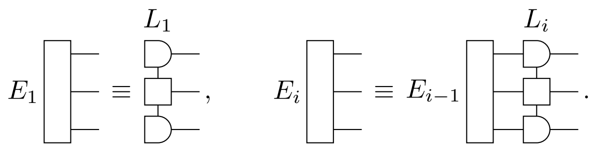
(12)

MPO expectation value:

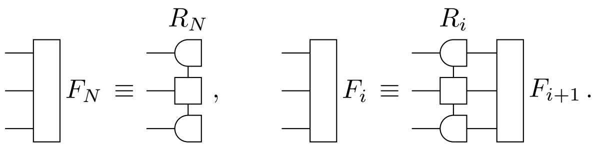


(13)

Environment tensors:

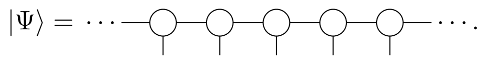


(14)



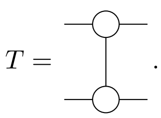
(15)

iMPS:



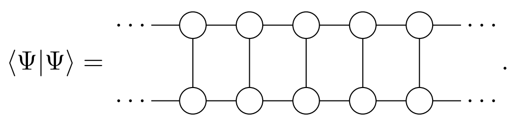
(16)

Transfer matrix:



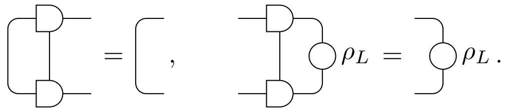
(17)

MPS norm:



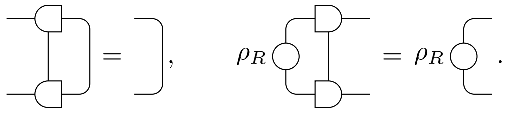
(18)

Left-orthogonal form:



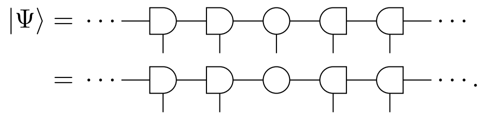
(19)

Right-orthogonal form:



(20)

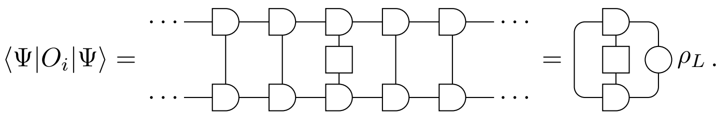
Mixed-canonical form:



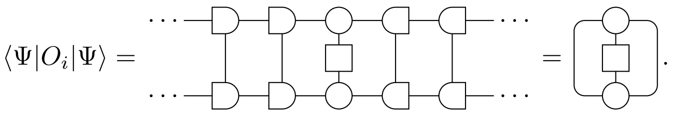
(21)

(22)

iMPS expectation value:

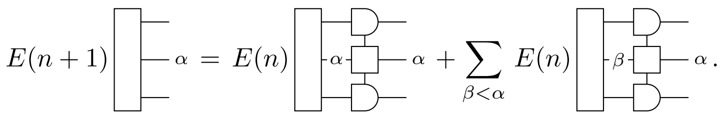


(23)



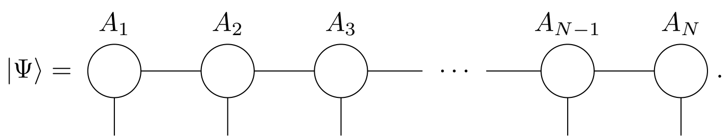
(24)

Environment tensor recursion relation:

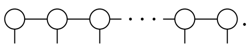


(25)

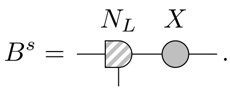
Big diagram:



(26)

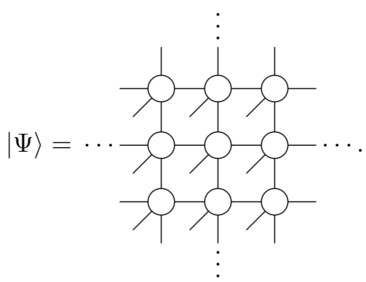
Inline diagram: $|\Psi\rangle =$ 

Patterns for tensors:



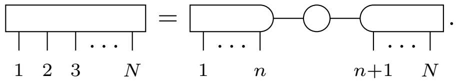
(27)

iPEPS:



(28)

Schmidt decomposition:



(29)