
Hybrid quantum-classical circuit optimization with the ZX-calculus

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Résumé

Quantum algorithms are normally represented as circuits containing both quantum and classical wires. While common optimization techniques focus on rewriting solely the pure quantum subcircuits, a global optimization process exploiting the properties of the measurement operation can further simplify the circuits for applications such as error correction. This poster presents the work-in-progress about using the graphical ZX-calculus to optimize hybrid quantum-classical circuits with measurements and classical logic.

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