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Layout Generation with Decoherence Estimation for Gate-Model Quantum Computer Architectures[1] LASZLO GYONGYOSI, University of Southampton, SANDOR IMRE, Budapest University of Technology and Economics — We define a method for quantum circuit layout generation for gate-model quantum computer architectures. We propose an algorithm for the optimal placement of the quantum computational blocks of gate-model quantum circuits with arbitrary number of entangled connections in the layout. We introduce a method for the decoherence estimation in superconducting quantum computers with multilayer quantum gate structures.

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