

Tytuł publikacji:

Solving Capacitated Vehicle Routing Problem with Equal Demand Using Quantum Approximate Optimization Algorithm on Superconducting Quantum Computer.

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Abstrakt:

In this article a quantum-ready formulation was used for solving the equal demand capacitated vehicle routing problem on a superconducting quantum computer. A formulation based on a serving customer binary decision variable was used. The solving method was based on the Quantum Approximate Optimization Algorithm where quantum circuit parameters were optimized using a simulation on a CPU. Computational experiments confirm that a small instance of the equal demand capacitated vehicle routing problem can be solved on a superconducting quantum computer and the results depend on the approach used during the execution of Quantum Approximate Optimization Algorithm.

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