# A hybrid architecture approach for quantum algorithms.

## ABSTRACT

Problem statement: In this study, a general plan of hybrid architecture for quantum algorithms is proposed. Approach: Analysis of the quantum algorithms shows that these algorithms were hybrid with two parts. First, the relationship of classical and quantum parts of the hybrid algorithms was extracted. Then a general plan of hybrid structure was designed. Results: This plan was illustrated the hybrid architecture and the relationship of classical and quantum parts of the algorithms. This general plan was used to increase implementation performance of quantum algorithms. Conclusion/Recommendations: Moreover, simulation results of quantum algorithms on the hybrid architecture proved that quantum algorithms can be implemented on the general plan as well.

**Keyword:** Hybrid architecture; Quantum algorithm; Quantum computing.