**Abstract**

We provide a series of quantum algorithms from the less elaborate to the most complex one. However, the last and more elaborate of these quantum algorithms has running time polynomial at the worst case for all inputs. It is based on a classical deterministic polynomial-time algorithm, which is presented rigorously. The latter proves indirectly, because the Sub-Graph Isomorphism problem is **NP**-complete, that **P** = **NP.** (A detailed study of the **P** vs. **NP**, one can find in one of my papers to be published in the *Nature Communications* journal.) Therefore it is shown that the class **NP** belongs to the **BQP** quantum complexity class. Finally, we see that if there isn't isomorphism then that last quantum algorithm could be probably faster than the classical counterpart on all related inputs.