A Design for an Affordable 2-Qubit Optical Quantum Computer

Tzounakis, Dimitrios (School: 1st General Lyceum of Thermi)
Pavlakis, Konstantinos (School: 1st General Lyceum of Thermi)

With this project we try to broaden the accessibility of quantum computing hardware. In order to achieve that, we designed a quantum computer that is relatively affordable when compared to the industry. It's meant to help people get a hands-on approach on how quantum computing works. To do that we created a functional mockup meant to showcase the original idea since we did not have access to a suitable lab nor did we have the required budget. The relative cost of any other design can wager from 700€ up and to 100k€ depending on the desired accuracy and scale. In addition to that we made a website explaining our original designs along with everything required to fully understand how they work. The project started as a resource for people to easily learn about quantum hardware and in that spirit it is completely open source and everyone is encouraged to help in our cause. Open source means that anyone can inspect, modify, and enhance what we have publicly available completely free of charge.

Awards Won: