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Quantum Information Labs for High-School Students

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Introducing students to quantum science at an earlier age is essential to developing the quantum workforce and fostering widespread appreciation of quantum technologies. Hands-on active learning can help make the abstract ideas of quantum information tangible to students, but lab experiments in quantum information are traditionally too expensive, too complex, or too indirect to be useful in classrooms. In this session, we'll outline efforts by the Institute for Quantum Computing (IQC) to develop lab activities for the Quantum School for Young Students (QSYS) and other student groups primarily at the upper high-school level. In particular, we'll highlight a low-cost 3D-printed quantum key distribution demonstration that gives students hands-on experience with the fundamental principles of quantum information.

Keyword-1

quantum

Keyword-2

education

Keyword-3

outreach

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