How to Get Started in Quantum Computing

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Abstract: Quantum Computing generates a lot of excitement. People light up. People sparkle. People want to understand what it is, how it works, where it's at, what it needs, and how they can get involved. Many working professionals with backgrounds in fields such as physics, chemistry, computer science, math, engineering, and others frequently ask: how can I get started? The answer can be long and detailed. There are a variety of ways to learn, outside of being a student in a formal academic program. The amount of content related to quantum computing is large, involving the qubits or qudits, the controls like lasers or microwaves, how to implement gates, how to implement error correction, how to program a quantum computer, how to design quantum algorithms, and how to apply a quantum computer to applications. The learner must prioritize and choose a path on this journey. We suggest identifying questions of interest, starting a project, and injecting freshness into both, as it is oft stated that "fresh ideas are needed". We offer a github of resources containing Q-and-A guides to support the newcomer's enthusiasm and interest and to help accelerate their journey. We see this as a win-win-win-win situation for us, for them, for Quantum Computing and for society.

Keywords: quantum computing, career transition, continuing education, helping people, energy, enthusiasm, fresh ideas

Relevance: the poster relates to the Quantum Computing topic, and to the Quantum Education and Training topic.