

Contemplating Quantum Foundations and Applications through Qiskit (with Interactive Hands-on Session)

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Abstract

The ongoing revolution in the field of quantum computing is paving ways for phenomenal research advances. This talk and hands-on session will provide an introduction to this field. We will build and simulate quantum circuits using the IBM Quantum Composer. We will then translate this graphical understanding into code by exploring Qiskit which is an open-source quantum software library. Through this approach, we will explore core quantum concepts including superposition and multi-qubit entanglement, and implement fundamental gates (single and two-qubit gates). This session will equip you with the foundational knowledge to start building and running your own quantum circuits.