**CityU Architecture Lab for Arithmetic and Security (CALAS) Seminar Series**

# Quantum Computing: 2024 Outlook

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## Abstract:

Quantum computers are emerging from theoretical possibilities into engineered, reliable systems. While we still have a long way to go, the progress in the last few years has been astounding. We now have systems that can perform meaningful computations with hundreds of quantum bits (qubits). In this talk, I will first introduce the basics of quantum information processing, and then will describe techniques that will enable quantum computations to scale into realms of useful applications.

## Biography:

Prof. Greg BYRD is a professor and associate head of the Department of Electrical and Computer Engineering at NC State University, where he is the associate director of the IBM Quantum Innovation Center (QIC). He is vice chair of the IEEE Quantum Technical Community (QTC) and co-founding organizer of the IEEE Intl. Conf. on Quantum Computing and Engineering (QCE), also known as Quantum Week. HIs research areas include quantum computing, parallel computing, and computer architecture.