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Scaling Quantum Education and Industry in Africa

Monday, 17 November 2025 11:00 (30 minutes)

This talk outlines a comprehensive strategy for establishing a robust quantum science and technology (QST) ecosystem in Africa. The talk begins by analyzing the current research landscape, identifying both existing strengths and critical gaps in the continent's QST topics. The talk then presents a multi-tiered educational blueprint, from core undergraduate foundations to specialized graduate paths, designed to cultivate a skilled quantum workforce. Furthermore, the talk maps these academic programs to both "ready" and "missing" industry clusters—from quantum computing and cryptography to advanced materials and pharmaceuticals—highlighting concrete opportunities for economic growth and technological innovation. The work of the Alexandria Quantum Computing Group (AleQCG) and QEgypt is showcased as a successful model for grass-roots educational development, demonstrating a scalable pathway for Africa to actively participate in the global quantum revolution.

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