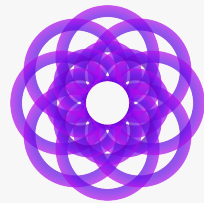# Q-CTRL Hosts Free Online Quantum Computing Masterclass Series to Accelerate Global Industry Readiness

Q-CTRL's comprehensive, interactive series aims to equip and inspire future quantum leaders and advance the mission of the International Year of Quantum

SYDNEY, AUSTRALIA, May 12, 2025 /EINPresswire.com/ -- Q-CTRL, the global leader in quantum infrastructure software, today announced the launch of its quantum education and workforce development webinar masterclass series, an interactive global education initiative in celebration of the International Year of Quantum Science and Technology. Leveraging Black Opal's interactive learning modules, the series is designed to empower learners of all backgrounds and help meet the growing demand for quantum-savvy

Individuals who complete all Black Opal's learning modules are recognized with completion badges and certification.

employees. The free online webinar series will feature expert-led sessions that make the principles of quantum computing intuitive, engaging, and accessible.

Based on quantum physics versus the classical physics of today's computers, quantum computing is a transformational technology that is expected to begin solving previously intractable problems across industries over the next few years. With McKinsey projecting that less than half of quantum computing jobs will be filled by 2025 due to a workforce shortfall, the Black Opal masterclass series comes at a critical moment. Each session will help participants build a foundational understanding of quantum principles and gain hands-on skills through simulations and coding exercises in real quantum programming languages.

Hosted by quantum computing scientists, engineers, and featured guest speakers from across

the quantum technology ecosystem, the masterclass series brings Q-CTRL's award-winning edtech learning platform to life through guided tutorials, live demonstrations, and practical quantum programming exercises. The platform has already helped over 26,000 learners upskill for the quantum era, with more than 28,000 certifications awarded.

The first masterclass, Visualizing quantum concepts: A cheat sheet for getting up to speed quickly, took place on April 14, World Quantum Day. Claire Edmonds, Senior Scientist at Q-CTRL, and Mick Conroy, Product Manager for Black Opal, kicked off the series by offering an accessible overview of the fundamentals of quantum computing.

The next session will demonstrate how educators can use Black Opal to boost student engagement and outcomes through a flipped learning approach. Led by Michael Hush, Q-CTRL's Chief Scientific Officer, and Mick Conroy, this masterclass can equip any classroom or corporate training team with the tools to become quantum-ready. Additional sessions are scheduled throughout 2025 to align with global events commemorating the International Year of Quantum. Registration is now open via the [Quantum Computing Masterclass landing page](#). Learners can also view the classes on demand.

"Students across the globe need access to science education in all areas, including quantum information science," said Dr. Emily Edwards, member of the steering committee for the International Year of Quantum Science and Technology, and faculty at Duke University. "Online tutorials, and particularly free or low-cost ones, play an important role, especially when students do not have access to in-person instruction where they live. It is great to see companies like Q-CTRL engaging in quantum education, and I hope to see more options emerge as a result of IYQ."

"The International Year of Quantum Science and Technology takes place during a once-in-a-generation technology shift," said Aravind Ratnam, Chief Strategy Officer at Q-CTRL. "Through our quantum education masterclasses, we're continuing our mission to demystify quantum computing and enable millions of learners worldwide to become part of the quantum revolution."

This new initiative builds on Q-CTRL's global leadership in workforce development, with Black Opal already adopted at national and state levels — including in the UK, India, Qatar, and among major enterprise clients. Most recently, Q-CTRL partnered with the Indian state of Tamil Nadu to deliver the world's first mandatory rollout of quantum computing education across all technical degree programs. Since the rollout in August 2024, 3,000 students have been trained using Black Opal.

"As quantum technologies begin to influence real-world applications, ensuring our teams are equipped to understand and engage with them is increasingly important," said Phil Intallura, Group Head of Quantum Technologies at HSBC. "Black Opal's intuitive, interactive platform makes quantum computing accessible to our diverse teams, regardless of their technical

backgrounds. This initiative not only demystifies complex concepts but also empowers our workforce to engage confidently with emerging quantum technologies, positioning us at the forefront of financial innovation."

"Black Opal is a well-designed online course that provides an accessible and rigorous coverage of quantum computing," said Dr David Benoit, Senior Lecturer in Molecular Physics and Astrochemistry at the University of Hull. "The course really helped us link quantum physics theory to the practicalities of developing algorithms on quantum computers."

"We built Black Opal to make learning quantum fun, visual, and effective," said Mick Conroy, the Product Manager for Black Opal at Q-CTRL. "These webinars are another step in scaling access and building a global quantum-ready workforce."
To learn more and register, visit: https://q-ctrl.com/lp/quantum-2025

About Q-CTRL
Q-CTRL is a key player in the global quantum technology industry as a category-defining business for AI-powered quantum infrastructure software. Leading quantum computing hardware providers integrate its performance-management software with their superconducting and silicon-based platforms to deliver unprecedented capabilities to end users. The company's global leadership in quantum sensing for defense and dual-use was featured in The New York Times. Q-CTRL also developed Black Opal, an award-winning edtech program that enables users to quickly learn quantum computing.

Founded by Michael J. Biercuk in November 2017, Q-CTRL has assembled the world's foremost team of expert quantum-control engineers, providing solutions to global quantum technology leaders including Fortune 500 companies, startups, national research labs, and academic institutions. The company has international headquarters in Sydney, Los Angeles, San Francisco, Berlin, and Oxford.

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