

Quantum Brilliance, CyberSeQ and LuxProvide Partner to Advance Post-Quantum Cryptography with Certified Randomness

Consortium will develop PQC methods built on true random numbers, integrate into reference architectures, and validate at scale on MeluXina supercomputer

STUTTGART, GERMANY, October 1, 2025 /EINPresswire.com/ -- [Quantum Brilliance](#), [CyberSeQ](#),

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*Mark Mattingley-Scott, Head
of Europe at Quantum
Brilliance*

and [LuxProvide](#) announced a letter of intent to collaborate on quantum-secure encryption methods aligned with post-quantum cryptography (PQC). The partnership will focus on algorithms that use true random numbers to resist attacks from quantum-capable adversaries.

True random numbers generated by Quantum Brilliance’s virtual quantum processing unit are nondeterministic outputs of quantum-physical measurement. They enable Certified Randomness for use across current and emerging PQC standards from NIST and European agencies such as BSI, ENISA, and ANSSI. Quantum Brilliance’s diamond-based quantum accelerators operate at room temperature, which supports availability, miniaturization,

and parallel deployment in data centers.

CyberSeQ will integrate 32-byte blocks of quantum-derived numbers into specialized PQC algorithms and assess statistical quality, entropy, and certifiability. Validation will run on LuxProvide’s MeluXina supercomputer. Demand for PQC is rising across sectors, with financial services and other industries seeking new approaches to encryption and authentication that can withstand quantum-enabled computation.

“This partnership is an important milestone on the path to near-term cybersecurity and encryption. Post-quantum cryptography will not succeed without Certified Randomness, and our quantum accelerators are well-suited to play a leading role. Together with our partners, we look forward to developing tamper-resistant, future-proof IT security,” said Mark Mattingley-Scott, Head of Europe at Quantum Brilliance.

“With this partnership, we will advance security for the quantum era. We are integrating true random numbers into our PQC reference architecture, delivering on our promise: quantum-secure, AI-smart, and cloud-native,” said Mark Tehrani, Founder and CEO of CyberSeQ.

“Our MeluXina supercomputer, combined with our tools, provides the optimal environment to generate and store true random numbers. We are excited to be part of this consortium and to contribute to a more secure digital future,” said Vittorio Santonocito, Head of Startup at LuxProvide.

About Quantum Brilliance (QB)

Founded in 2019, Quantum Brilliance is a venture-backed Australian-German manufacturer of quantum computing hardware. The company provides diamond-based quantum accelerators, software tools, and applications. Its vision is to enable broad adoption of quantum accelerators so industry can leverage edge computing and next-generation supercomputers. Quantum Brilliance partners across North America, Europe, and Asia-Pacific with governments, high-performance computing centers, research institutions, and industry leaders.

About CyberSeQ

CyberSeQ delivers cutting-edge cybersecurity solutions powered by AI and quantum computing. Our flagship product, Infralytics, offers real-time threat detection, risk assessment, and compliance monitoring for cloud infrastructures. We help businesses meet EU and UK regulatory requirements while ensuring scalable, cost-effective protection of their critical assets. Join us in shaping the future of secure digital infrastructures.

About LuxProvide

LuxProvide is at the forefront of digital intelligence, combining data science expertise with supercomputing capabilities. Centered around MeluXina, Luxembourg's advanced supercomputer, LuxProvide focuses on accuracy, security, and sustainability in the digital realm. The company transcends traditional technological boundaries, fostering innovative solutions that elevate the human experience and drive positive change. LuxProvide is dedicated to pioneering a future where technology not only evolves but enhances every aspect of life.

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