NQCC and Google Quantum AI launch new initiative to accelerate quantum science in the UK

(Oxfordshire, UK; 12th December 2025): The National Quantum Computing Centre (NQCC) and Google Quantum AI announce a new collaboration to bring access to Google's Willow quantum processor to more researchers in the UK.

The joint initiative builds on the UK/US Technology Prosperity Deal and a broad collaboration agreement between Google Cloud and the Department for Science, Innovation and Technology (DSIT). This initiative aligns with the UK National Quantum Strategy and will help collaboration in quantum technologies and advanced computing.

As a part of the collaboration, the NQCC and Google Quantum AI invite proposals from UK researchers and research consortia for access to the state-of-the-art Willow processor, with world-leading error correction, for high-impact, innovative projects.

UK Science Minister Lord Vallance said:

"As Europe's leader when it comes to the quality and impact of our research, the UK already sets the pace globally when it comes to quantum R&D. Access to this new resource from Google will help keep Britain's quantum innovators at the cutting edge, bolstering their efforts to put quantum to work, in the design of new medicines, the shift to clean affordable energy, and more. All of this work is crucial to this Government's mission of national renewal."

Dr Michael Cuthbert, Director at the NQCC commented:

"Together, the NQCC and Google Quantum AI aim to support cutting-edge science that will deepen understanding, accelerate discovery, and unlock new applications for quantum computing across fields such as life science, materials, chemistry, and fundamental physics. By combining the UK's research excellence with Google's world-leading quantum hardware and expertise, we are creating a powerful platform for scientific innovation."

The collaboration seeks to advance the discovery of novel applications for quantum computers and accelerate progress toward quantum advantage over the most powerful classical computers.

UK researchers will be able to submit proposals describing their intended experiments or applications, the scientific rationale behind them, and how access to Willow could enable transformative results.

The successful research team will work closely with experts from Google to design and conduct their experiments, while the NQCC will make available its technical expertise in support of the project. The NQCC will also offer research grants to fund researcher time for the successful UK research group.

Projects being put forward will be expected to demonstrate technical feasibility on Willow quantum processors, and motivation and potential for high impact, such as a path to beyond-classical applications or scientific discoveries.

Dr Hartmut Neven, Founder and Head of Google Quantum AI comments "We're thrilled to deepen our long-standing partnership with the UK quantum ecosystem at such a pivotal time for the field. The UK is home to world-leading research institutions, and we are looking forward to seeing them use our state-of-the-art Willow processors to power scientific breakthroughs and uncover new real-world applications."

More information can be found at: https://www.nqcc.ac.uk/nqcc-and-google-quantum-ai-collaboration/

Press enquiries:

NQCC press enquiries: Soma Deshprabhu, Communications Manager, NQCC, soma.deshprabhu@stfc.ac.uk

Google press inquiries: press@google.com

About NQCC:

The NQCC is the UK's national lab for quantum computing, dedicated to accelerating the development of quantum computing by addressing the challenges of scaling up the technology. The

centre is working with businesses, government, and the research community to deliver quantum computing capabilities for the UK and support the growth of the emerging industry.

The NQCC's programme is being delivered jointly by UKRI's research councils, EPSRC and STFC. It is a part of the National Quantum Technologies Programme (NQTP) to develop and deliver quantum technologies across the areas of sensing, timing, imaging, communications and computing.

The centre is headquartered in a purpose-built facility on STFC's Rutherford Appleton Laboratory site at the Harwell Campus in Oxfordshire.

About Google Quantum AI:

Google Quantum AI is a pioneering research and development team whose mission is to build large-scale, error-corrected quantum computing for otherwise unsolvable problems. They build full-stack quantum computers using superconducting transmon qubits, and their research spans from the fundamental physics to applications and algorithms that will allow quantum computers to have real-world impact.

-ENDS-