Riverlane and Rigetti Computing Partner with Oak Ridge National Laboratory to Work to Improve HPC-Quantum Integration

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CAMBRIDGE, United Kingdom and BERKELEY, Calif., Feb. 27, 2024 (GLOBE NEWSWIRE) -- Riverlane, the global leader in quantum error correction technology, and Rigetti (Nasdaq: RGTI), a pioneer in full-stack quantum-classical computing, today announced their participation in a project led by the US Department of Energy's Oak Ridge National Laboratory (ORNL) to explore the challenges of integrating a quantum computer with a large-scale, supercomputing centre.

Quantum computers will play an important role in the future of computing as they promise to solve problems that are traditionally impossible to tackle on even the world's largest 'classical' supercomputers. As the performance of quantum computers improves, their integration with high-performance computing (HPC) to tackle complex computing challenges will become commonplace. We believe the result will be the ability to solve problems for society that are unsolvable today.

To assess the viability of integrating quantum computers into HPC environments, the project partners will build the first-ever benchmarking suite ('QStone') for measuring the performance of a joint HPC + Quantum system. It will be run on ORNL's Summit, the fifth fastest supercomputer in the world, developed by IBM in 2018. For the quantum components, researchers will use simulated hardware based on key elements of Riverlane's quantum error correction stack, in particular its qubit control system which is already installed at the ORNL labs, and real remote hardware located at Rigetti's headquarters in California.

ORNL is among the leaders in advanced quantum research with a dedicated team of researchers and a network of commercial, academic and government partnerships. Their work covers various research efforts from developing and benchmarking scalable, fault-tolerant algorithms to designing quantum sensors.

Riverlane, Rigetti and ORNL will publish the results of the project, sharing the key learnings about interoperability issues and performance from interfacing early quantum devices with HPC-infrastructure. This will include key learnings about whether quantum computers should be installed on-site or can be successfully used through remote access.

"This project aims to move us ahead in making quantum computing devices both more practical in general and more interoperable with HPC systems. The benchmarking will help us explore and identify early challenges associated with such integration which will benefit future research in this space. We are proud to be part of this exciting initiative and understand more about how our quantum error correction stack can work in tandem with a world-leading supercomputing centre," said Marco Ghibaudi, Riverlane VP of Engineering.

"Integrating quantum processors with modern HPC is an important next step in the evolution of both quantum computing and HPC. Collaborating with ORNL and Riverlane to develop and test the integration of Rigetti quantum hardware into ORNL's HPC systems could move us significantly closer to the deployment of the first quantum-enabled supercomputer," said Dr. Subodh Kulkarni, Rigetti CEO.

About Rigetti

Rigetti is a pioneer in full-stack quantum computing. The Company has operated quantum computers over the cloud since 2017 and serves global enterprise, government, and research clients through its Rigetti Quantum Cloud Services platform. The Company's proprietary quantum-classical infrastructure provides high performance integration with public and private clouds for practical quantum computing. Rigetti has developed the industry's first multi-chip quantum processor for scalable quantum computing systems. The Company designs and manufactures its chips in-house at Fab-1, the industry's first dedicated and integrated quantum device manufacturing facility. Learn more at www.rigetti.com

About Riverlane

Riverlane's mission is to make quantum computing useful sooner, starting an era of human progress as significant as the industrial and digital revolutions**.** To achieve this, Riverlane is building the Quantum Error Correction Stack to comprehensively control qubits and correct the billions of real-time data errors that prevent today's generation of quantum computers from achieving useful scale. Riverlane's customers are governments, quantum computer hardware companies and world-leading research labs. Investors include leading venture capital funds Molten Ventures, Amadeus Capital Partners and Cambridge Innovation Capital; the UK's national security investment fund (NSSIF); high-performance computing leader Altair; and the University of Cambridge.

Acknowledgement

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Cautionary Language Concerning Forward-Looking Statements

Certain statements in this communication may be considered "forward-looking statements" within the meaning of the federal securities laws, including but not limited to, expectations with respect to the Company's business and operations, including its expectations related to the collaboration with Riverlane and ORNL to explore the challenges of integrating a quantum computer with a large-scale, supercomputing centre and the results of succeeding in such integration with HPC and the ability to solve problems that are unsolvable today through such integration. Forward-looking statements generally relate to future events and can be identified by terminology such as "commit," "may," "should," "could," "might," "plan," "possible," "intend," "strive," "expect," "intend," "will," "estimate," "believe," "predict," "potential," "pursue," "aim," "goal," "outlook," "anticipate," "assume," or "continue," or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward-looking

statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Rigetti and its management, are inherently uncertain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: Rigetti's ability to achieve milestones, technological advancements, including with respect to its roadmap, and develop practical applications; the potential of quantum computing; the ability of Rigetti to obtain government contracts and the availability of government funding; the ability of Rigetti to expand its QCS business; the success of Rigetti's partnerships and collaborations; Rigetti's ability to accelerate its development of multiple generations of quantum processors; the outcome of any legal proceedings that may be instituted against Rigetti or others; the ability to continue to meet stock exchange listing standards; costs related to operating as a public company; changes in applicable laws or regulations; the possibility that Rigetti may be adversely affected by other economic, business, or competitive factors; Rigetti's estimates of expenses and profitability; the evolution of the markets in which Rigetti competes; the ability of Rigetti to implement its strategic initiatives, expansion plans and continue to innovate its existing services; disruptions in banking systems, increased costs, international trade relations, political turmoil, natural catastrophes, warfare (such as the ongoing military conflict between Russia and Ukraine and related sanctions and the state of war between Israel and Hamas and related threat of a larger regional conflict), and terrorist attacks; and other risks and uncertainties set forth in the section entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 and Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, and other documents filed by the Company from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and the Company assumes no obligation and does not intend to update or revise these forward-looking statements other than as required by applicable law. The Company does not give any assurance that it will achieve its expectations.

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