

# Kipu Quantum Signs Research Collaboration Deal With PASQAL to Optimize Quantum Algorithms

*Partnership aims to provide industrial quantum advantage sooner than competition through tailored analog solutions*

KARLSRUHE, GERMANY, June 12, 2023 /EINPresswire.com/ -- Kipu Quantum GMBH announced a two-year research and development agreement with PASQAL, a leader in neutral atoms quantum computing, to optimize quantum algorithmic function and expedite quantum benefits for enterprise.



Kipu Quantum is focused on developing hardware-specific algorithms for specific use cases and building enterprise solutions. The company created the first-of-its-kind algorithmic compression technology that reduces the length of quantum algorithms. Kipu's algorithms are more suitable for near-term quantum computing hardware, especially those incorporating analog approaches, including PASQAL's current quantum computers.

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*Prof. Enrique Solano, co-founder, and Chief Visionary Officer at Kipu*

PASQAL's technology was built upon the Nobel Prize-winning research of company co-founder Alain Aspect. In January 2023, PASQAL announced a €100 million Series B funding round. PASQAL is on track to deliver a 1,000 qubit quantum computer, which it believes will deliver major commercial advantages over classical computers, by 2024.

The company's customers include BMW, BASF, Johnson & Johnson, Siemens, Airbus, LG Electronics and Thales among many others.

In their collaboration, PASQAL and Kipu will work to bring this compression technology to

PASQAL's quantum hardware and work conjointly from the hardware level to the algorithmic level to develop highly competitive quantum computing performance that will transform tomorrow's aspirations into today's expectations.

"We are very excited to bring together Kipu Quantum's expertise in quantum algorithms with PASQAL's impressive hardware capabilities," said Prof. Enrique Solano, co-founder, and Chief Visionary Officer at Kipu. "The work developed between both teams will be a huge step forward in commercializing both Kipu's and PASQAL's technology."

"Current quantum computers cannot outperform classical computers because the capabilities of hardware do not match the requirements from algorithms," said Dr. Daniel Volz, co-founder, and CEO at Kipu.

"Our unique technology allows us to solve much bigger problems than competing algorithm approaches on the same hardware," he said. "It then becomes possible for our industrial customers to use much smaller quantum processors to solve their relevant problems thus reducing the wait time to useful quantum computing by several years."

PASQAL CEO Georges Reymond said, "This partnership with Kipu Quantum is another step towards delivering tangible quantum computing benefits for our customers and partners. Kipu Quantum's specialization in analog-based algorithms will help us explore the capabilities of our hardware and push the boundaries of near-term quantum advantage."

To learn more about PASQAL, visit [www.pasqal.com](http://www.pasqal.com).

#### About PASQAL

PASQAL builds quantum computers from ordered neutral atoms in 2D and 3D arrays to bring a practical quantum advantage to its customers and address real-world problems. PASQAL was founded in 2019, out of the Institut d'Optique, by Georges-Olivier Reymond, Christophe Jurczak, Professor Dr. Alain Aspect, Nobel Prize Laureate Physics, 2022, Dr. Antoine Browaeys, and Dr. Thierry Lahaye. PASQAL has secured more than €140 million in financing to date.

To learn more about Kipu, visit [www.kipu-quantum.com](http://www.kipu-quantum.com)

#### About Kipu Quantum GmbH

Kipu Quantum is a German startup operating at the intersection of the quantum computer hardware and application software layers, with disruptive technological and algorithmic solutions for industries worldwide. Founded in 2021, Kipu Quantum's approach has the potential to solve industry-relevant problems in the order of 1,000-5,000 physical qubits due to novel algorithmic compression methods.

Kipu's technology is compatible with all leading quantum hardware technologies. The company is currently testing its technology with customers in the pharmaceutical, chemical, logistics,

artificial intelligence, and finance industries.

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