

Atos opens up a new path to quantum annealing simulation

Paris, 7 July 2020 – [Atos](#), a global leader in digital transformation, announces the development of a new Quantum Annealing Simulator, thus becoming the world's first company to provide powerful simulation solutions to explore the two main technological paths of quantum computing: quantum annealing, via its new solution, and universal gate quantum computing, via its existing [Atos Quantum Learning Machine](#) offering (Atos QLM). Atos' Quantum Annealing Simulator will be compatible with the Atos Quantum Learning Machine, offering customers the best of both worlds while enabling them to switch quantum methods based on their specific needs.

While universal gate model quantum computing offers a wider range of opportunities than quantum annealing, it relies on qubits which are currently extremely prone to error. Quantum Annealing, being less affected by noise, brings us closer to affordable quantum applications and provides an exceptional way of exploring specific management and optimization problems. Delivering powerful quantum annealing simulation capabilities, Atos' new solution was designed to spur innovation in various fields, such as finance, energy, manufacturing, transportation, logistics, chemistry and pharmaceuticals, and by helping industrials and researchers in developing and testing quantum algorithms for the future NISQ era.

Atos' Quantum Annealing Simulator will use a classical architecture to simulate the behavior of a perfect, noiseless quantum annealer thanks to high performance computing techniques and top-class characteristics:

- Fully tunable – a software-based simulator that allows users to play with all parameters in the simulation;
- Highest efficiency – optimized to make the most of an HPC architecture while providing unequalled levels of results accuracy;
- Greatest Scalability – Atos' Quantum Annealing Simulator can emulate a few thousand perfect spins in a few seconds.

Agnès Boudot, Senior Vice President, Head of HPC & Quantum at Atos, explained: "*Since the launch of [Atos Quantum](#), the first quantum computing industry program in Europe in 2016, Atos has continuously worked to enrich its quantum ecosystem in order to enable its customers and the research community*

worldwide to continue to experiment with quantum technologies and identify concrete applications in as many fields as possible. Combining a team of highly-skilled experts, partnerships with research centers and universities around the world, insight from its QLM users' community and quantum simulation technologies based on two different approaches, Atos brings together unparalleled insight and experience to build the future of quantum computing".

Atos' Quantum Annealing Simulator will be available for researchers, students and businesses in Q4 2020.

About Atos

Atos is a global leader in digital transformation with 110,000 employees in 73 countries and annual revenue of € 12 billion. European number one in Cloud, Cybersecurity and High-Performance Computing, the Group provides end-to-end Orchestrated Hybrid Cloud, Big Data, Business Applications and Digital Workplace solutions. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos|Syntel, and Unify. Atos is a SE (Societas Europaea), listed on the CAC40 Paris stock index.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

Press contact

Marion Delmas | marion.delmas@atos.net | +33 6 37 63 91 99 |