Quantum Learning Machine

Quantum Computing and High Performance Computing Workshop 2018

18.12.2018
Atos
Results

Top 5 digital leader in Europe
€13 billion annual revenue circa
120,000 experts
73 countries
22 supercomputers in top500 +29% y2y
Atos structure

Five service lines

- BUSINESS&PLATFORM SOLUTIONS
- UNIFIED COLLABORATION
- BIG DATA AND SECURITY
- DIGITAL PAYMENTS
- INFORMATION AND DATA MANAGEMENT

- Cybersecurity services
- Mission-critical applications
- Big Data systems
- High-performance and Quantum Computing
Quantum Computing Committee

Our Vision

Thierry Breton
ATOS CEO

Serge Haroche
NOBEL 2012

Cédric Villani
FIELDS MEDAL 2010

Alain Aspect

David DiVincenzo

AND MANY OTHERS
Atos 2017
Our vision

Consulting

Enterprise Computing

Software Devs

Hardware Products

Bull
ENTERPRISE-CLASS DEVELOPMENT AND TESTING ENVIRONMENT
PROFESSIONAL CONSULTING SERVICES
FOCUS ON QUANTUM CODING
Quantum Computing
Our objective

- Algorithm development and programming cluster
- Training quantum simulation platform on selected algorithms
- Designing new computing architectures
- Quantum safe cryptography algorithms
Quantum Learning Machine

Features

1. Hybrid coding
2. 30 to 41 qubits emulation
3. Scaling-up
4. Interoperable
5. Hardware-agnostic programming
Quantum Learning Machine

Features

BullSequana Supercomputer
HPC-class binary hardware

RedHat Linux
Open-source HPC operating system

AtosQuantum Emulator
Deploys the inputs to the emulated QPU, collect the results and goes on with execution

Atos SDK
Python-based IDE with plugins for popular quantum algorithms and quantum noise simulation
Atos QLM
Consulting

- The essentials: Atos Fast Start
- Training on selected algorithms
- Training on custom algorithms
- Specialized consulting
Atos QLM

News

Atos sets milestones for the future of IT with its ‘Atos Quantum’ program Scientific Council

Paris, 1st June 2017

Atos launches construction of global R&D Lab to drive innovation in Quantum Computing

The Paris Region supports the development of this new lab, located in Les Clayes-sous-Bois (Yvelines), which positions the region as a strong technological hub

Les Clayes-sous-Bois (Yvelines), November 27, 2018

European Commission selects Atos for two major Quantum Flagship Initiative programs

Paris, December 4, 2018
Finis coronat opus

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