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NTU Q

IBM QUANTUM BREAKS THE 100-QUBIT PROCESSOR BARRIER

On Nov. 16, 2021, IBM Quantum debuted Eagle, a 127-qubit quantum processor. Eagle processors contain nearly twice the qubits of their previous 65-qubit Hummingbird processor. It is a important milestone for their IBM Quantum Roadmap. With Eagle, developers will be able to work together to understand how best to explore and develop on these systems to achieve quantum advantage as soon as possible.

In addition, IBM unveiled a concept for the future of quantum computing systems: IBM Quantum System Two. System Two introduces a new generation of scalable qubit control electronics together with higher-density cryogenic components and cabling. With this system, the hardware have more flexibility to increase the scale of chips.

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INTRODUCING QUANTUM SERVERLESS, A NEW PROGRAMMING MODEL FOR LEVERAGING QUANTUM AND CLASSICAL RESOURCES

To bring value to users and clients with IBM quantum systems, they need the programing model with serverless architecture. A serverless architecture can provide four advantages:

1. A developer focuses on coding only, with no need for infrastructure management consideration
2. Everything is a cloud service
3. The service requires no capacity or life cycle management considerations and scales seamlessly
4. Users pay only for consumption, never for idle time.

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IBM QUANTUM'S OPEN SCIENCE PRIZE RETURNS WITH A QUANTUM SIMULATION CHALLENGE

IBM Quantum announced the second annual Open Science Prize, This challenge asks participants to simulate a Heisenberg model Hamiltonian for a three-particle system on IBM Quantum's 7-qubit Jakarta system. Submissions are open now, and must be received by April 16, 2022

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QC WARE ANNOUNCES Q2B 2021: PRACTICAL QUANTUM COMPUTING

QC Ware announced fifth annual Q2B Practical Quantum Computing conference to be held at the Santa Clara Convention Center on December 7-9, 2021. Q2B is the world's largest quantum computing community, focusing on quantum computing applications and driving the discourse on quantum advantage and commercialization.

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COMMERCE LISTS ENTITIES INVOLVED IN THE SUPPORT OF PRC MILITARY QUANTUM COMPUTING APPLICATIONS, PAKISTANI NUCLEAR AND MISSILE PROLIFERATION, AND RUSSIA'S MILITARY

The Commerce Department's Bureau of Industry and Security (BIS) added twenty-seven foreign entities and individuals to the Entity List for engaging in activities that are contrary to the national security or foreign policy interests of the United States. This Entity List can prevent U.S. emerging technologies from being used for the PRC's quantum computing efforts that support military applications.

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