IBM Quantum Computing

Jean-Michel Torres
IBM Quantum France Team, Qiskit Advocate
torresjm@fr.ibm.com

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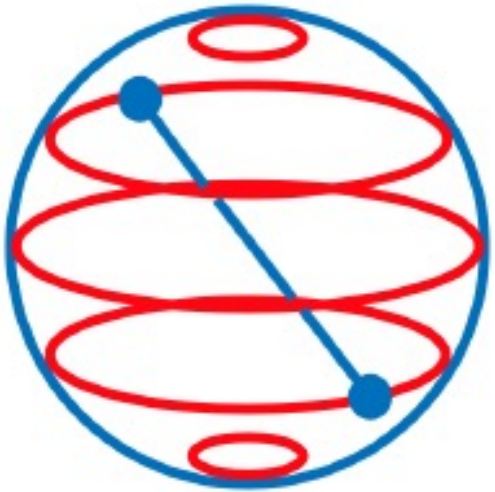

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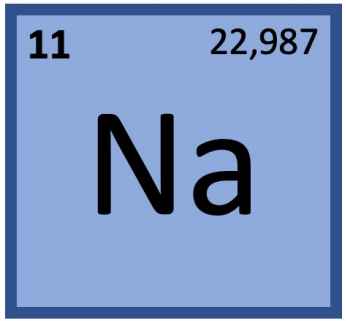
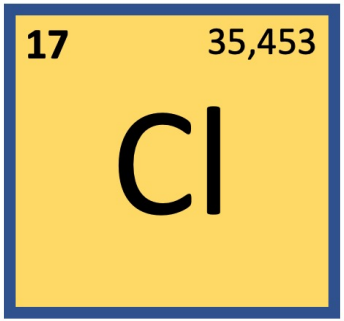
Mes connaissances en chimie :

métal explosif + gaz toxique = sel de table … ?





Agenda

- 14h : introduction, premiers pas, visite guidée des machines.
- 14h40 : qiskit crash course
- 15h20 : premiers algorithmes, et Grover
- 16h : pause
- 16h20 : VQE (Lena Pérennès)
- 17h20 : QPE
- 18h : quizz, coktail (« Itinéraire Bis »)
- 22h : fin

https://github.com/jmit34/RFCT

Pas de boisson/nourriture dans l'amphithéâtre,
L'amphithéâtre fermera à 19h30 : ne rien y laisser après la session, utiliser le vestiaire.

The road to Quantum Advantage

Quantum Science

Create the fundamental theoretical and physical building blocks of quantum computing.

Quantum Ready

Engage the world to prepare for the quantum computing era.

Launch of the IBM Q Network

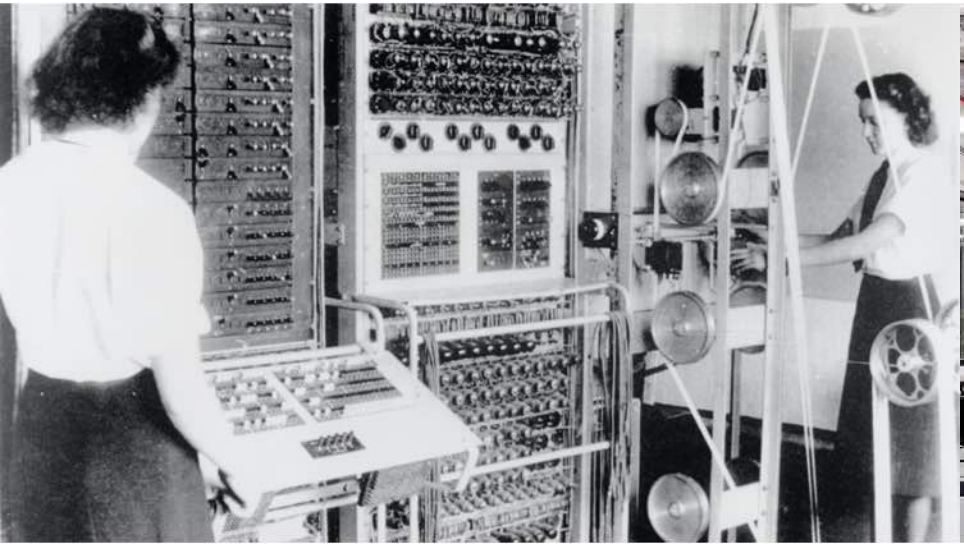
Quantum Advantage

Commercial advantage to solving real world problems with quantum computing systems.

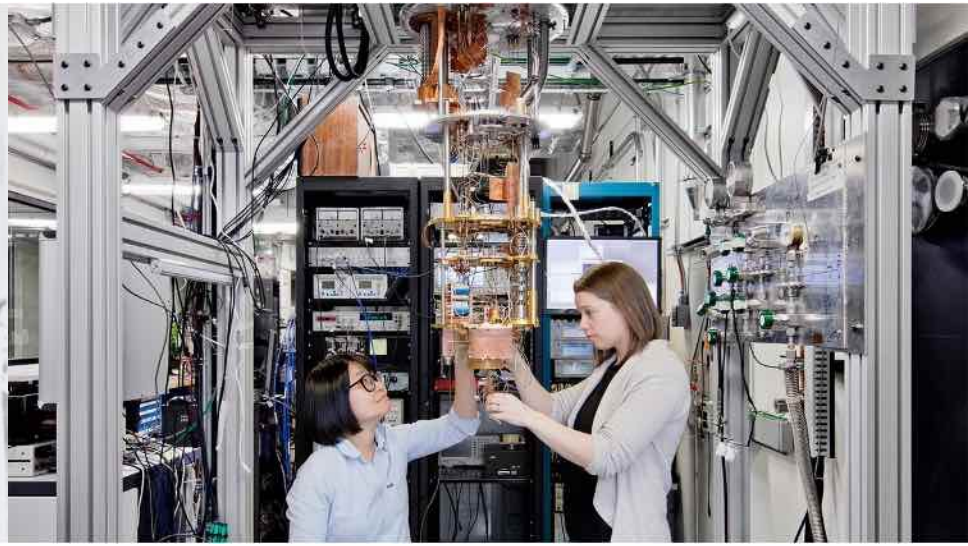
- Hybrid classical-quantum systems and solutions
- Extract commercial value
- Enable scientific discovery
- Demonstrate an advantage for using quantum computing for real problems of interest

1900s 2016 ~2020s 2050+

We are in the early stages of a rapidly advancing new computing technology



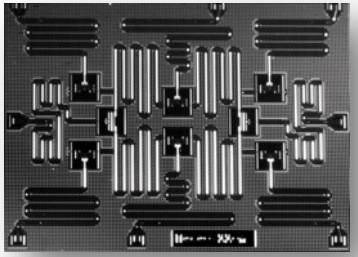
Classical Computer 1944



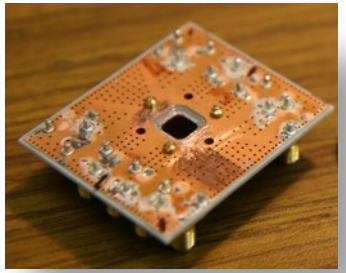
Quantum Computer 2019

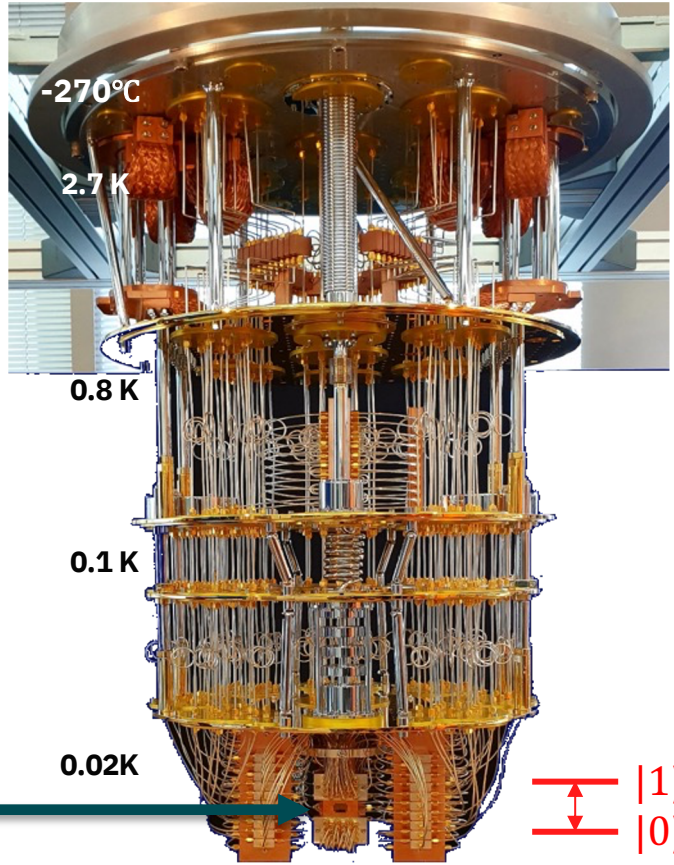
Insight into the “Cool” Quantum World

Superconducting chip

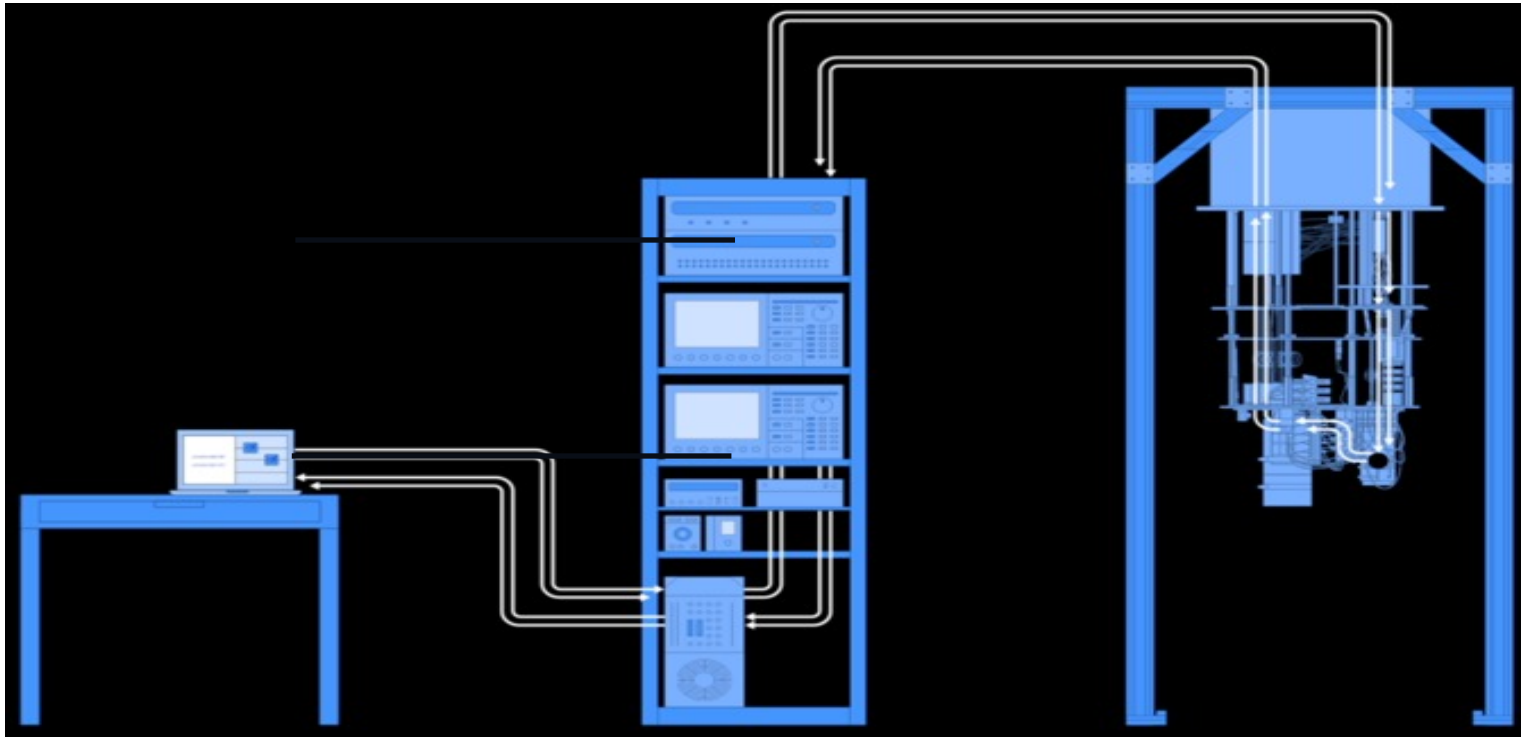


Circuit board with qubit-Chip at 20mK

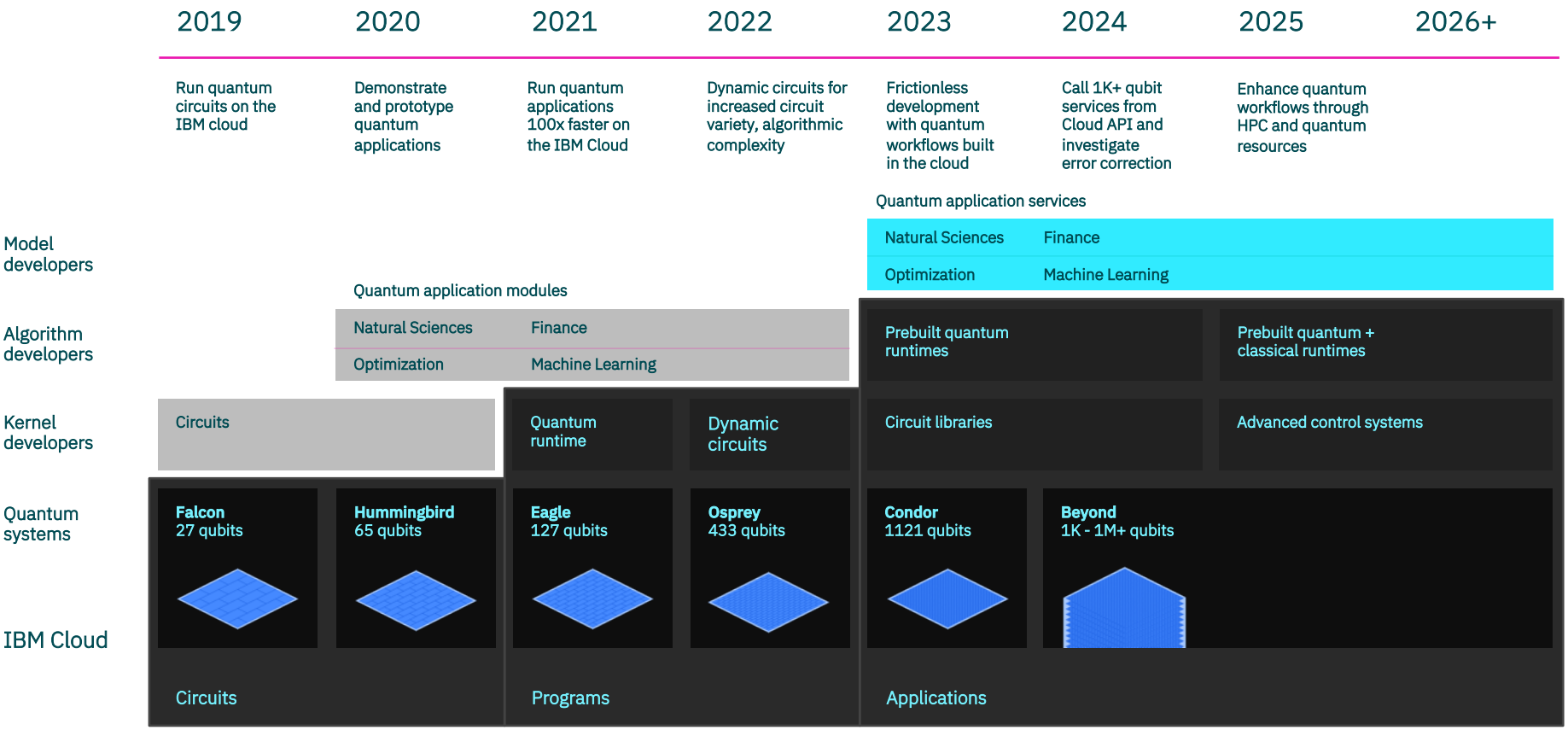




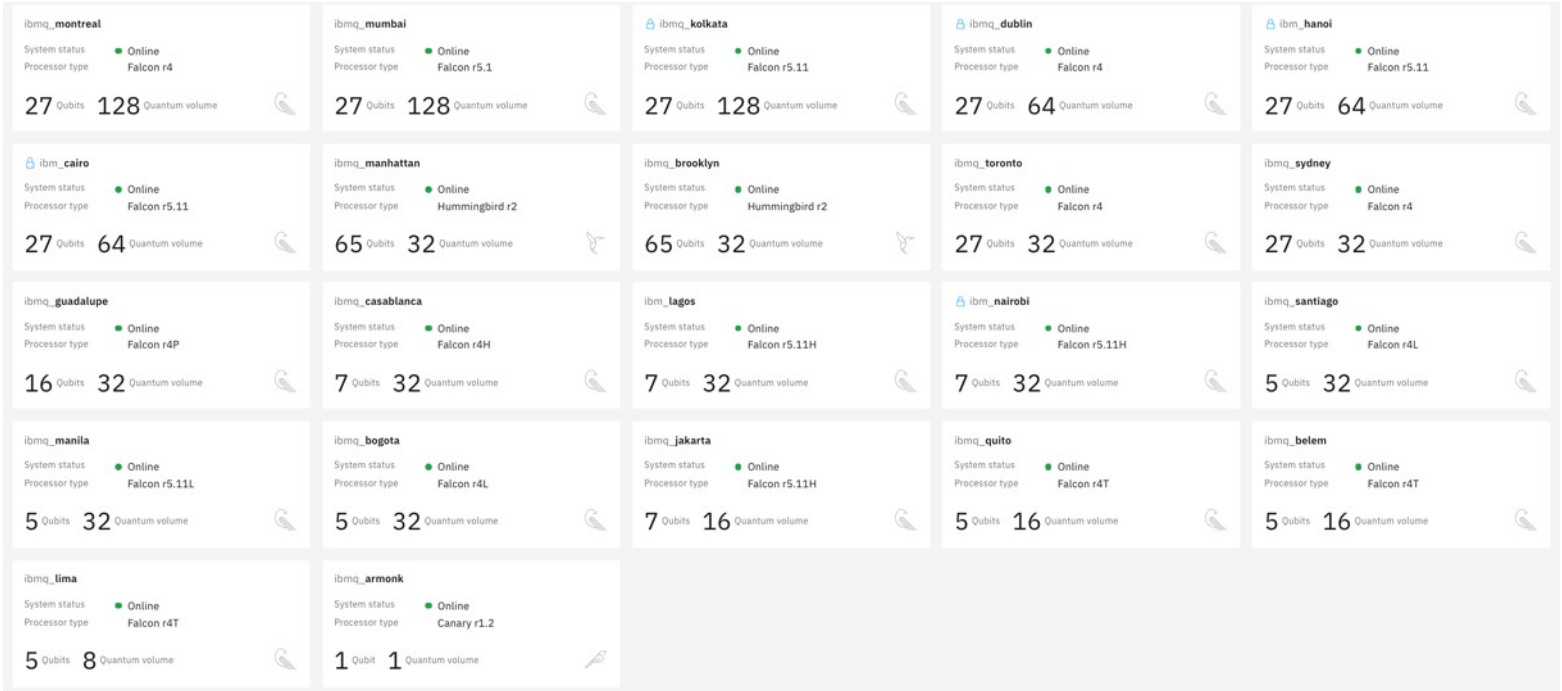
IBM Q Quantum Computing System Accessible in the Cloud

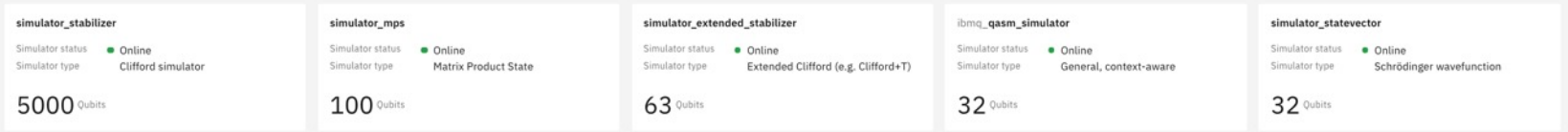


IBM Quantum Development Roadmap



IBM Quantum Systems in the Cloud





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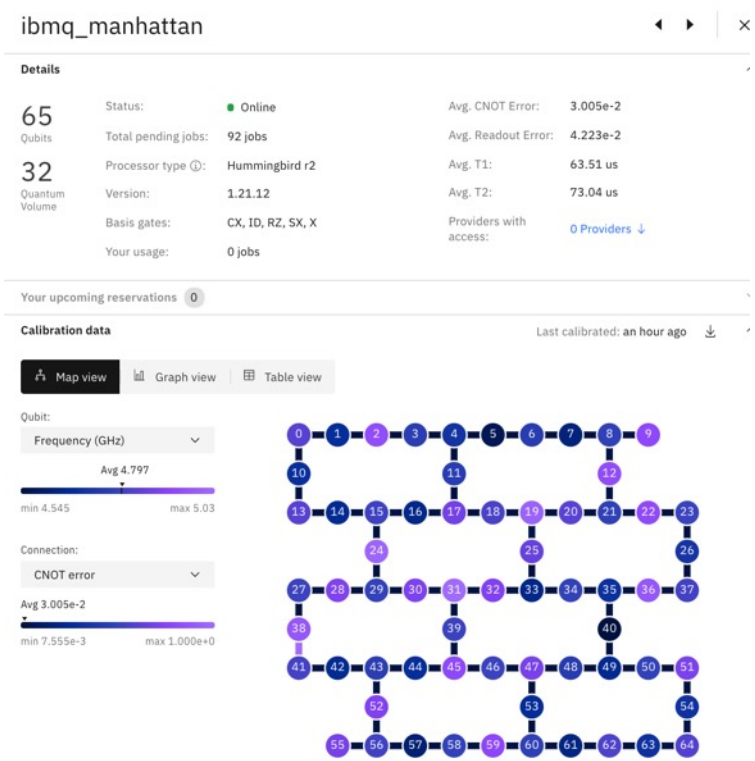
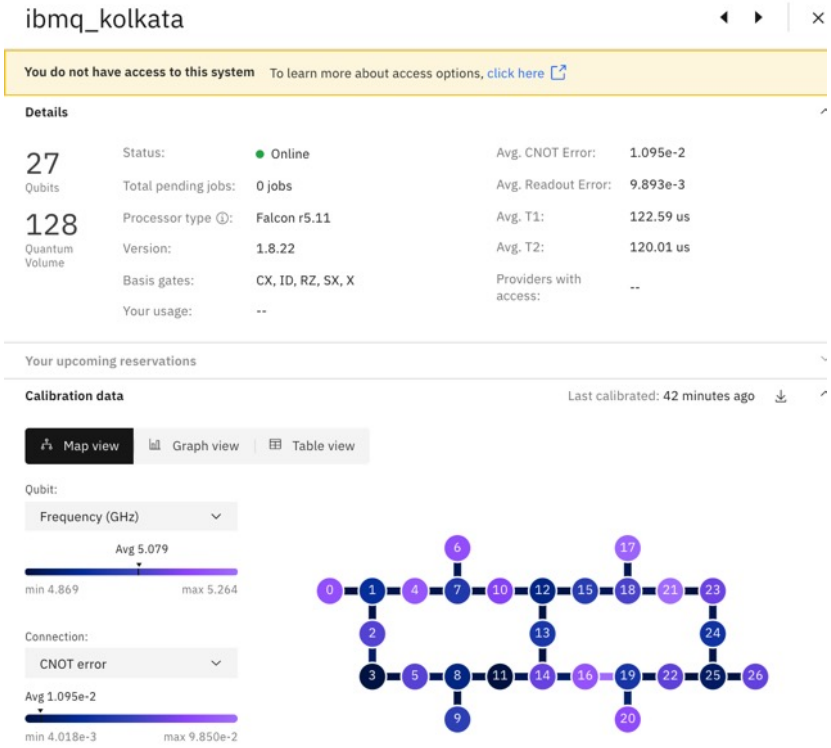
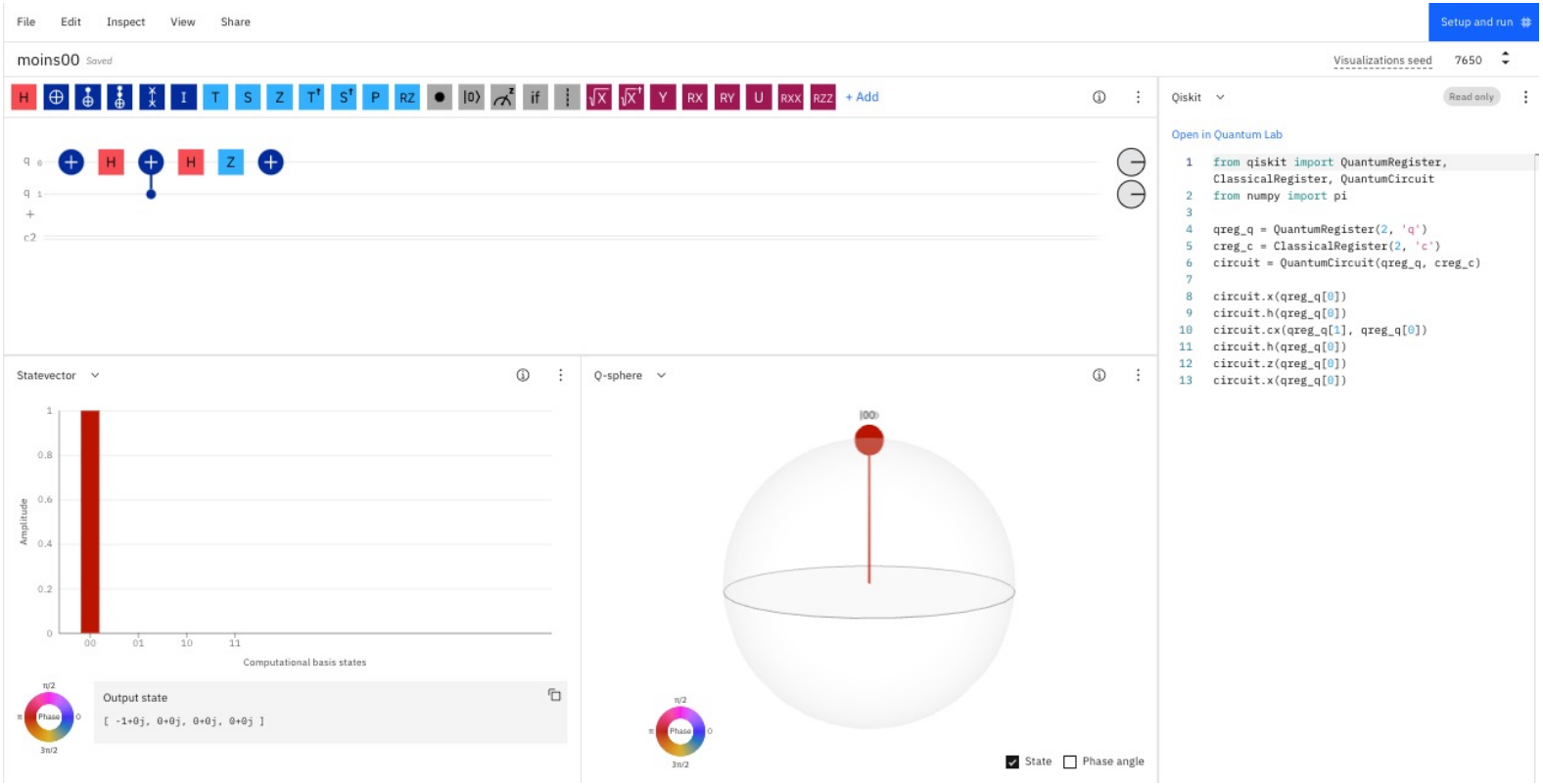


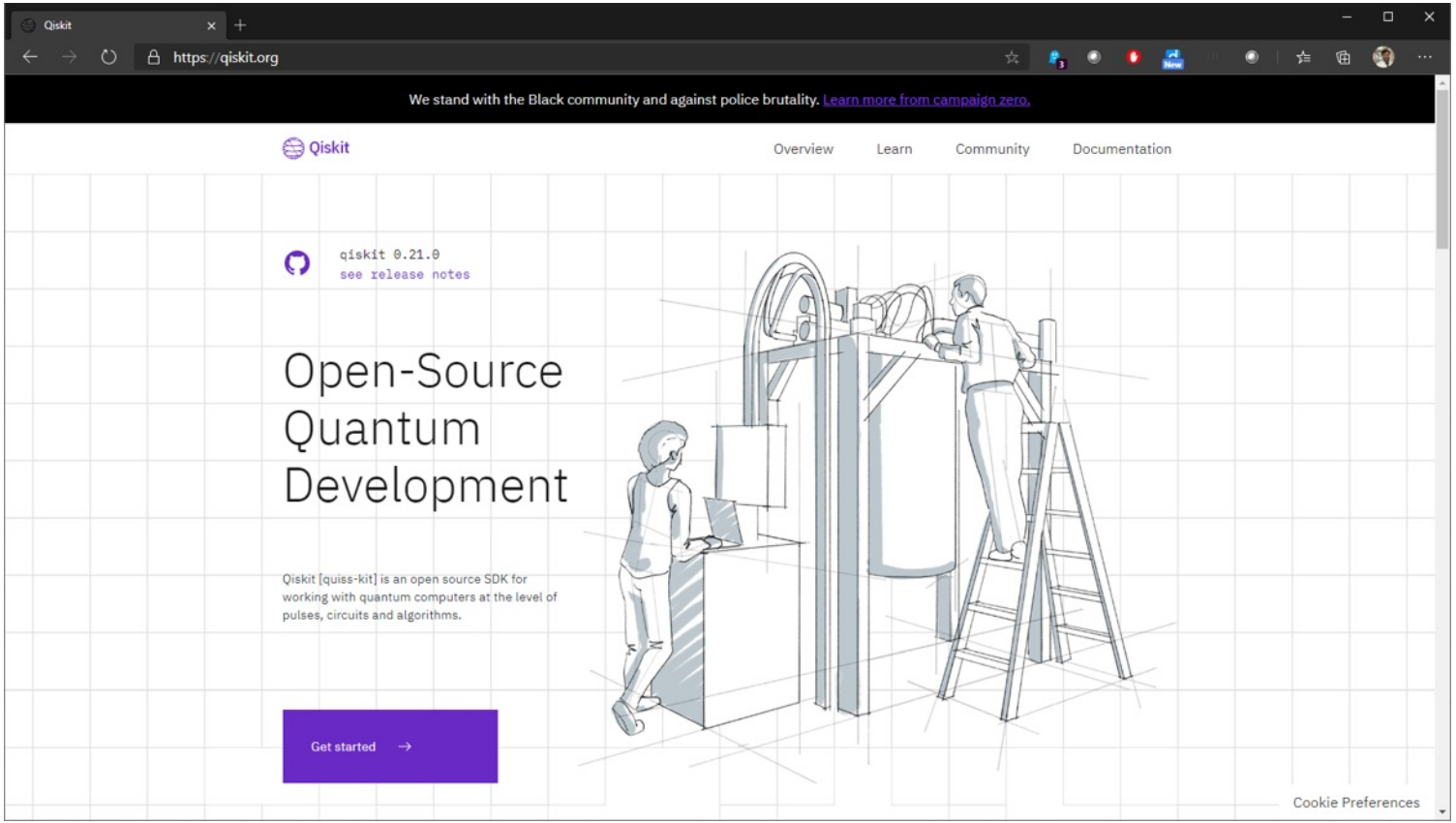


IBM Quantum Computing : composer

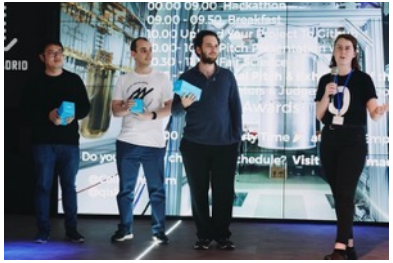


qiskit : open source Python Library for quantum computing

qiskit.org



Worldwide Qiskit community events



Qiskit
@qiskit
Follow

Congrats to our #qiskithaifa winners for their project, Ghost States: Simulating the speculative paths of the wave-function under measurements. 🏆 Keren Avnery, @MatanParnas, Gilad Pollack, @galvien

2:24 AM - 29 May 2019 from Israel

7 Retweets 26 Likes

Qiskit
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Our #qiskitmadrid hackathon was a blast! Thank you to all of the hackers for their contributions to #qiskit! Check out the fun for yourself 👇 (1/3)

1:42 PM - 31 May 2019

31 Retweets 64 Likes

Qiskit @qiskit · May 31
Want to learn more about the details of the hackathon projects? Click the link for the full blog recap 👉 bit.ly/2WeXyfd #quantumcomputing (2/3)

Recap: Madrid Hackathon
Qubit-based games, cryptography, random numbers—Madrid went full quantum last weekend at our first international Qiskit hackathon.
medium.com

Merci pour votre attention