

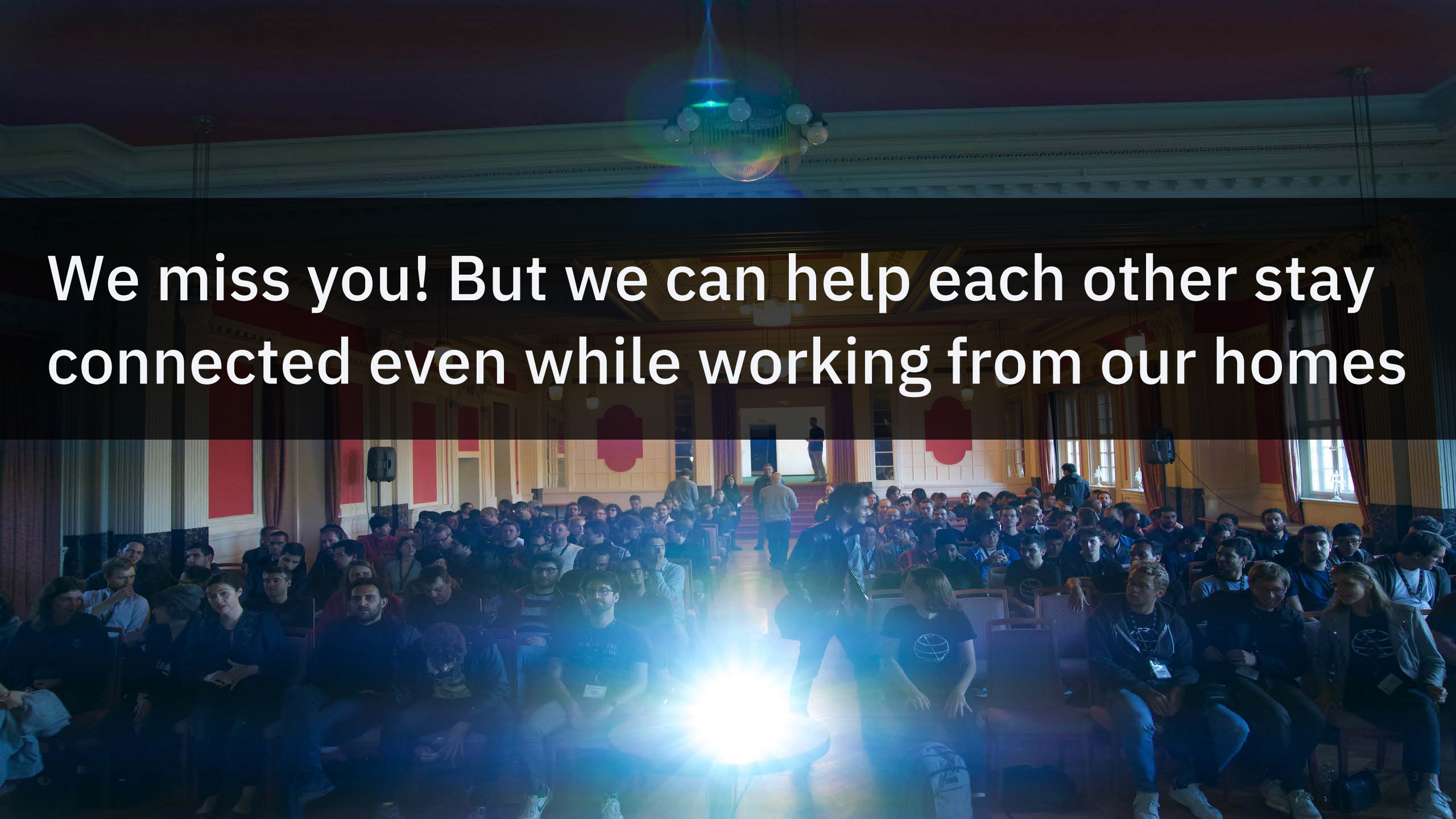
Qiskit | Hackathon Global

🌟 Welcome 🌟

Congratulations on joining our first global virtual hackathon

IBM Quantum

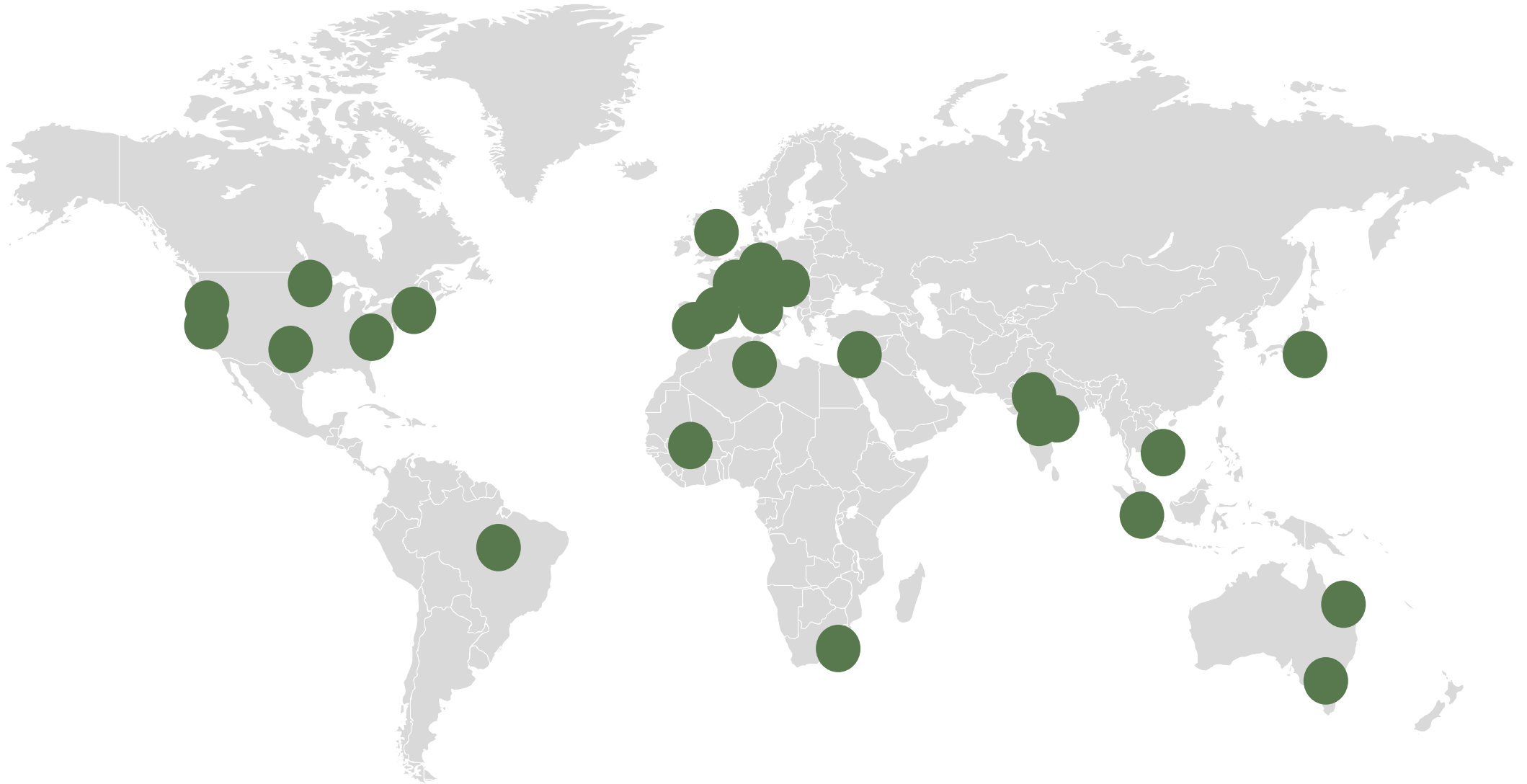


A large group of people, mostly young adults, are seated in a grand hall with high ceilings, ornate moldings, and red walls. A large chandelier hangs from the ceiling. The people are looking towards the front of the room. A bright light source is visible in the foreground, creating a lens flare effect. The text "We miss you! But we can help each other stay connected even while working from our homes" is overlaid in white on a dark background across the top half of the image.

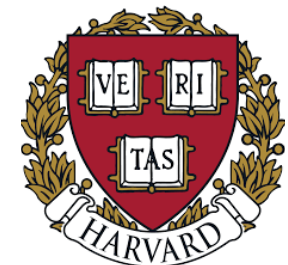
We miss you! But we can help each other stay connected even while working from our homes

20+ COUNTRIES

IBM Quantum



55+ ORGANIZATIONS



October 7

Wednesday

12:00 PM Registration Deadline

4:00 PM Live Presentation:
Welcome to Qiskit Hackathon Global!

5:00 PM Live Q&A: Team Formation

5:30 PM Team Formation Begins

5:30 PM Active Support: Team Forming Begins

8:00 PM Active Support: Team Forming Ends

October 8

Thursday

9:00 AM Teams Finalized

9:30 AM Unofficial Hackathon Start Time
Live Q&A: General Support
“Straggler” Support

10:00 AM Hackathon Begins

9:00 PM Hackathon Continues

October 9

Friday

8:00 AM “The Final Crunch”

10:00 AM Hackathon Ends

11:00 AM Live Q&A: Presentations

11:30 AM Presentation Submission Deadline

11:45 AM Final Presentations Begin

1:45 PM Final Presentations End

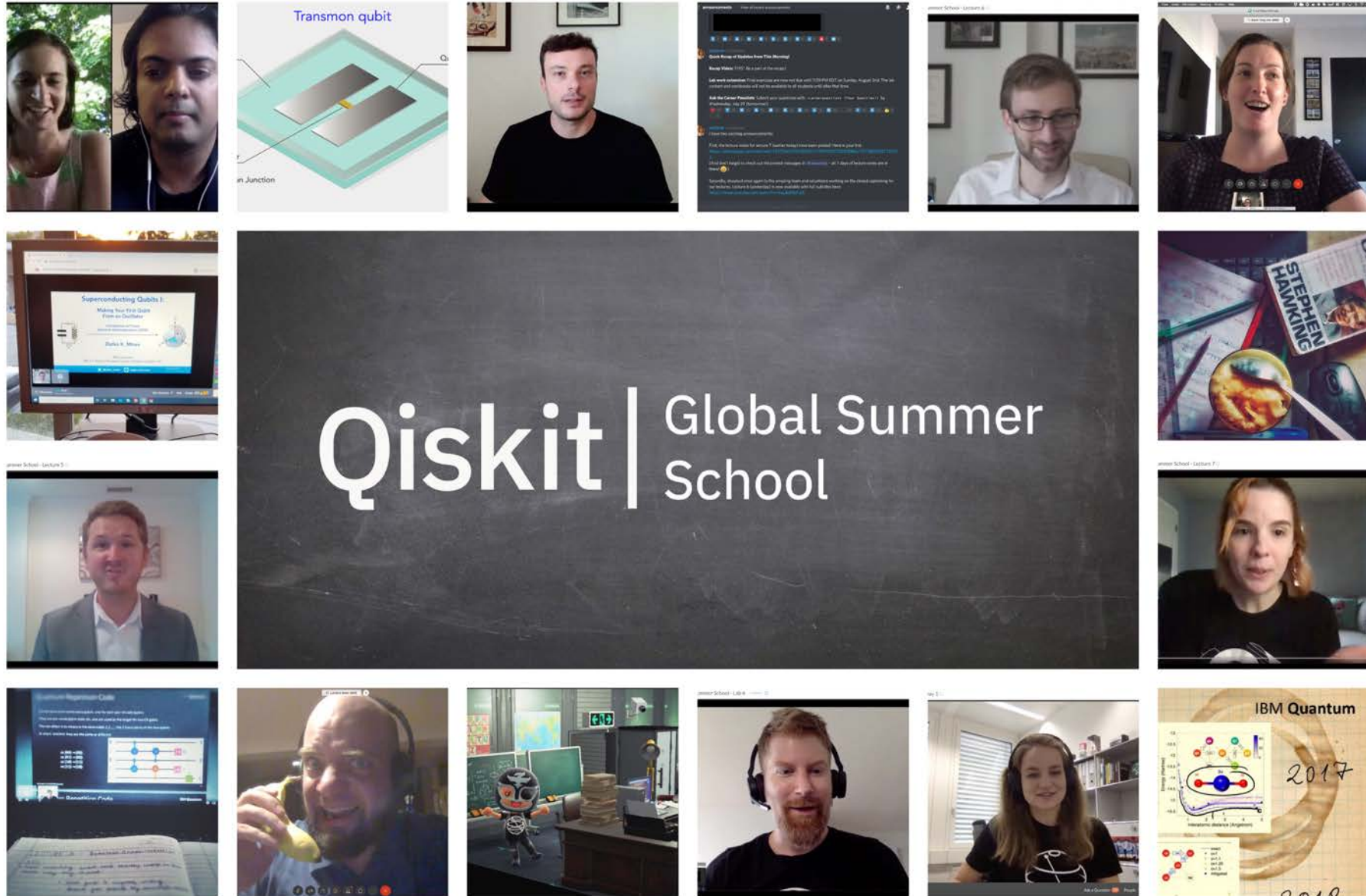
3:45 PM Award Ceremony

5:00 PM Virtual Concert Celebration

SCHEDULE
EDT

Virtual events can be amazing if you have community ❤️

IBM Quantum





What builds a quantum community?

OPEN SOURCE



Explore Qiskit.org

The single best landing spot for new and existing members of the Quantum Community. Get started here to learn more about all things Qiskit.



Be Part of the Github Community

Learn how to write your first quantum program - by having fun! Check out the repo of community-contributed Jupyter notebooks that leverage the features of Qiskit



Join the Qiskit Slack Community

Join the Qiskit Slack Community to connect with Advocates, IBMers, and other members of the community to ask questions and find the answers you are looking for (making connections along the way)!

EDUCATION



Subscribe to Qiskit YouTube

For high-quality and fun videos that are accurate, practical, and engaging. Get started with the Coding with Qiskit series.



Learn Quantum with the Qiskit Textbook

The textbook is not only a coursework supplement: it's a comprehensive and interactive self-learner's resource for programming quantum computers using Qiskit!



Compete in Qiskit Camps & Challenges

From virtual Quantum Challenges, university hackathons, to full-scale Qiskit Camps - join a local event to put your Qiskit skills to the test and connect in person with fellow Qiskitters, as well as IBM Quantum Researchers.

LEADERSHIP



Organize Community Events

With support from the IBM Quantum team, plan and host hackathons, meetups, or other events at your local university or community!



Apply to be an IBM Quantum Intern

Experience contributing to Qiskit, fundamental research in quantum computing, and promoting the relevance of quantum computing while gaining valuable skills and essential experience.



Become a Qiskit Advocate

Be a community leader focused in growing and developing open-source and Quantum communities, research, and development.

**We can change the
future of computing**

We can change the
workforce
future ✓ of computing

Career Roles in Quantum Computing at IBM

IBM Quantum

STUDY

Physics

Math

Computer Science

Electrical Engineering

Computer Engineering

Mechanical Engineering

RESEARCH

Quantum computing theory

- Error correction
- Quantum algorithms
- Quantum device and quantum operations physics

Quantum applications

Quantum hardware and device design, including automated Hamiltonian extraction from geometry

Optimal control theory and experiment

Quantum verification, validation, benchmarking

Multi-qubit gates optimization

Quantum transduction

Materials science and engineering

Decoherence mechanisms

Low-noise cryogenic amplifiers

Experimental physics (low noise/cryogenic/RF/qubit) measurements

Simulation of quantum systems/physical systems

SOFTWARE

Architecture, systems software, and firmware engineering

Scientific programming

Programming languages such as Python, C++, and their bindings (Cython, pybind11, etc)

Graph algorithms and data-structures

Compiler design

Program language design

Qiskit

DevOps, Security, Cloud Services & APIs

User experience design

Quantum applications research

HARDWARE

Quantum engineering

Micro fabrication (especially thin-film deposition, lithography, and Josephson junction growth)

Packaging (bump bonding, fanout/interposers, light-tight enclosures)

Microelectronics process development and integration

Microwave circuit engineering

Mechanical engineering / Thermal engineering

Quantum control and classical electronics

Real-time systems, including DSP and FPGAs

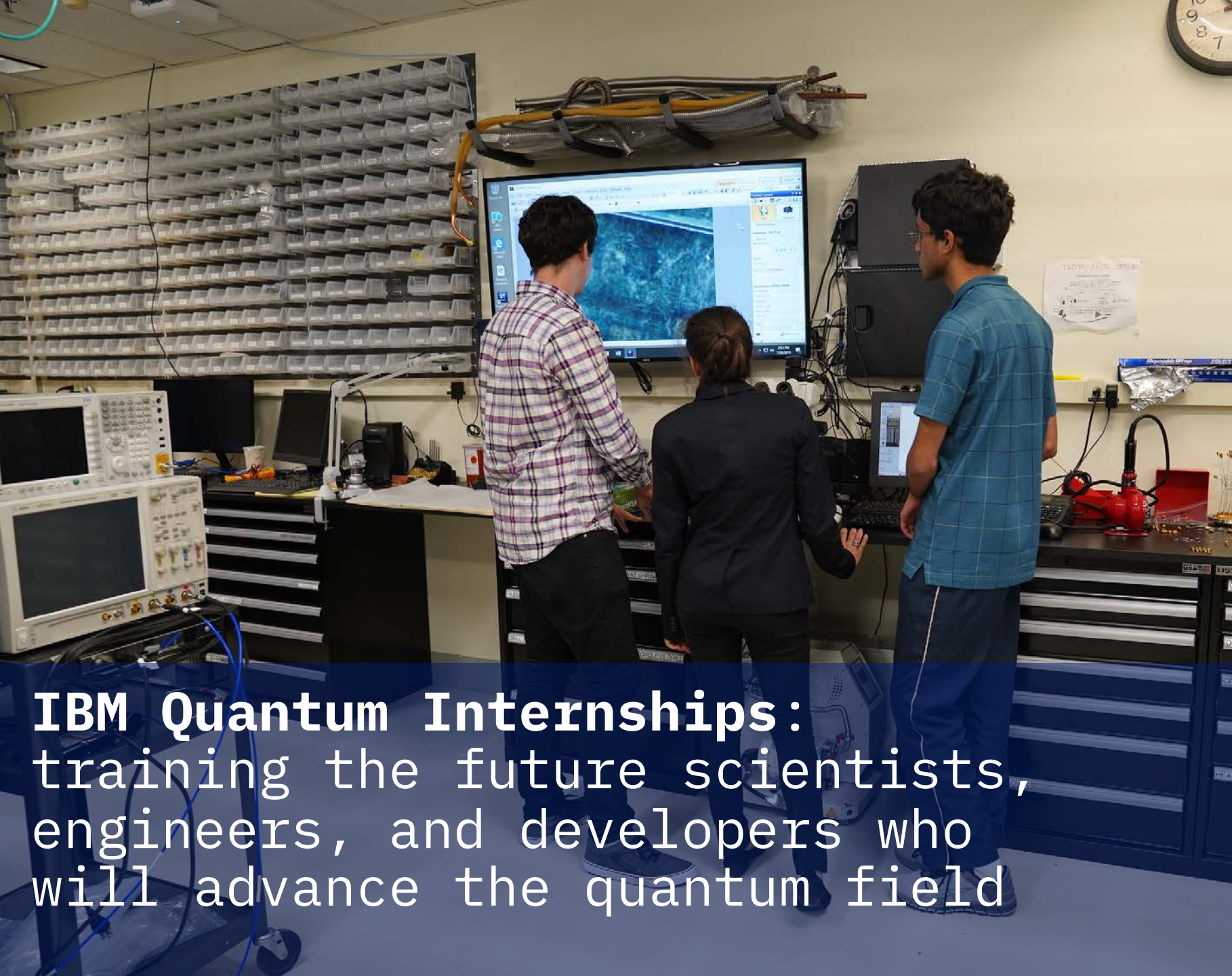
RF and μ W radio transceivers

Low-power cryoelectronics, e.g. CryoCMOS and SFQ

Circuit design

Chip design and layout

Microwave Modeling



>70+ interns
globally in 2020

>28 managers

>51 mentors

IBM Quantum Internships:
training the future scientists,
engineers, and developers who
will advance the quantum field

How to Apply

ibm.co/quantuminternships

Please apply by Monday, November 2, 2020 to receive the best chance at consideration

Apply to the job requisite most closely aligned with your interest and experience

Cover letters and recommendation letters are *not* required



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IBM Quantum **x** **<The Coding School />**

Qubit by Qubit's Introduction to Quantum Computing
*for **high school students and above***
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🌟 Good Luck! 🌟