

# IBM Announces Collaboration with North Carolina State University to Accelerate Quantum Computing

## NC State to join the IBM Q Network as first university-based IBM Q Hub in North America

YORKTOWN HEIGHTS, N.Y., May 10, 2018 /PRNewswire/ -- IBM (NYSE: [IBM](#)) today announced that North Carolina State University (NC State) will join the [IBM Q Network](#)™ as the first university-based IBM Q Hub in North America. The university will work directly with IBM to advance quantum computing and industry collaborations, as part of the IBM Q Network's growing quantum computing ecosystem.

A collaboration of leading Fortune 500 companies, academic institutions and national research labs, the IBM Q Network provides early access to [IBM Q](#)™ commercial quantum computing systems, via the IBM Cloud, with the goal of exploring practical applications important to business and science. Hubs within the network are critical for accelerated industry collaborations, learning, skills development and implementation of quantum computing, globally.

NC State will broadly engage in joint collaborations with industry and research affiliates to explore quantum computing. The university will have access to IBM Q commercial quantum computing devices, including the most advanced and scalable universal quantum computing systems available, starting with a 20 qubit IBM Q system, followed by a [50 qubit](#) system which will be made available in the next generation IBM Q systems.

"Academic collaborations are essential to growing the quantum computing community as we look to discover practical quantum applications and drive business and scientific breakthroughs," said Dr. Bob Sutor, vice president of IBM Q Strategy and Ecosystem, IBM Research. "Building on a 30-year research and education partnership, NC State will play a key role in helping IBM continue to extend our quantum computing ecosystem."

NC State will help foster the growth of a quantum computing ecosystem which is based on IBM's open source quantum software and developer tools, including the public [IBM Q Experience](#)™, which offers access to 5 qubit and 16 qubit systems; and the open quantum software development kit, [QISKit](#)™, which allows users to create and run quantum computing programs. To date, more than 80,000 users of the IBM Q Experience, have run more than 4 million experiments and generated more than 65 third-party research publications.

"The hub will create a unique opportunity for NC State to address its strategic plan of supporting interdisciplinary scholarship and preparing students for the future," said Dr. Alan Rebar, vice chancellor for research and innovation at NC State. "Our researchers and students will work with IBM scientists, engineers and consultants to further explore and advance quantum computing. The hub, which will be operated from NC State's Centennial Campus, will also drive new curriculum development at NC State, focused on quantum computing."

North Carolina State University is the latest university hub to join the IBM Q Network, which currently includes University of Oxford, Keio University, and University of Melbourne. Additional IBM Q hubs include IBM Research and Oak Ridge National Lab.

### **About IBM Q**

IBM Q is an industry-first initiative to build commercial universal quantum computing systems for business and science applications. For more information about IBM's quantum computing efforts, please visit [www.ibm.com/ibmq](http://www.ibm.com/ibmq).

## **About North Carolina State University**

NC State is a pre-eminent teaching and research enterprise that excels across disciplines and contributes more than \$6.5 billion to North Carolina's economy. More than 34,000 undergraduate and graduate students learn by doing - pursuing original research, starting new companies, forging connections with top employers, and serving local and global communities. NC State's 9,000 faculty and staff are world leaders in their fields, bridging the divide between academic disciplines and training high-caliber students to meet tomorrow's challenges. Together, they forge powerful partnerships with government, industry, nonprofits and academia to remake our world for the better.

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