

IBM and Keio University Announce Collaborations with JSR, MUFG Bank, Mizuho Financial Group and Mitsubishi Chemical to Accelerate Quantum Computing in Japan

Industry partners to join IBM Q Network to explore practical applications of quantum computing for business and science

TOKYO, May 17, 2018 /PRNewswire/ -- IBM (NYSE: [IBM](#)) and Keio University announced the first clients to join as members of the IBM Q Hub at Keio University. They include: JSR, MUFG Bank, Mizuho Financial Group, and Mitsubishi Chemical. The first IBM Q Hub in Asia, which officially opened today, Keio University will work with IBM to help organizations explore quantum applications important to business and science.

These initial four organizations will join the broader IBM Q Network, a collaboration of Fortune 500 companies, academic institutions, and national research labs, and will have access to IBM Q's commercial 20 qubit system via the cloud, followed by a 50-qubit system which will be made available in the next generation IBM Q systems.

The Faculty of Science and Technology at Keio University hosts one of six global IBM Q Hubs, including IBM Research, Oak Ridge National Laboratory, the University of Oxford, the University of Melbourne, and North Carolina State University. The IBM Q Network facilitates cooperation among hubs, strengthens collaborations with IBM scientists and engineers, and accelerates a global effort specializing in the development of practical quantum applications.

"The combination of IBM Q's quantum hardware, software, and scientific expertise with Keio University's 20 years of quantum computing research is why JSR, MUFG Bank, Mizuho Financial Group, and Mitsubishi Chemical joined our IBM Q Hub. Together, we will explore the ways quantum computing will meet the future needs of their industries," said Kohei Itoh, Dean of the Faculty of Science and Technology, Keio University.

IBM will offer APIs, quantum software tools, libraries and applications to hub institutions and member companies, as well as IBM technical expertise on new quantum technology and industrial applications to advance the expansion of its IBM Q Network of collaborators.

"The next era of computing is quantum -- it will be one of the most critical technologies for business and science breakthroughs moving forward," said Dr. Bob Sutor, vice president, IBM Q Strategy and Ecosystem, IBM Research. "We see the establishment of hubs for research and industry collaboration like at Keio University as essential to the development of early, practical quantum applications and building the growing quantum computing community."

"JSR's corporate philosophy is 'Materials Innovation,' and we will make every effort to broaden the field of chemistry through quantum computing, exploring the possibilities of new materials development. At the same time, we will also work together with Keio University and IBM to help develop much needed world-class quantum research and technical skills," said, Mitsunobu Koshiba, Representative Director and President, JSR Corporation.

"Recent progress in quantum computing has been remarkable, and has tremendous potential for applications in a wide range of financial business processes, including asset management and risk calculation. We consider the IBM Q Hub at Keio University a great step toward the practical use of quantum computers and joint IT," said Hironori Kamezawa, Senior Managing Corporate Executive Group CIO & Group CDTO, MUFG Bank, Ltd.

"The growth of quantum computing promises technological advancements beyond anything our classical computers could ever achieve. Mizuho will collaborate with the IBM Q Hub at Keio University, and their wealth of knowledge and world-leading universal quantum computing technology to research the potential of advanced financial services," said Junichi Kato, Senior Managing Executive Officer, Mizuho Financial Group, Inc.

"We decided to join the IBM Q Hub at Keio University because we know it is important to be 'quantum ready,' now. With the aim of becoming a truly global company, THE KAITEKI COMPANY's Mitsubishi Chemical will challenge itself to develop new materials that contribute to a sustainable society. We also expect the hub to serve as a starting point in developing the next generation of quantum researchers," said Masayuki Waga, President & CEO, Mitsubishi Chemical Corporation.

About Keio University

Keio University houses 10 undergraduate faculties and 14 graduate schools. The Faculty of Science and Technology, serving as the location of the IBM Q Hub to be opened soon, was originally founded as the Fujiwara Institute of Technology in 1939, and later became the Faculty of Engineering at Keio University in 1944 (this was reorganized in 1981 to become the current Faculty of Science and Technology.) The Faculty of Science and Technology includes 11 departments, and strives to create new scientific technology through cooperation and advice shared between each department in achieving ever higher results. The university has accumulated research on quantum computers for 20 years, and the Quantum Computing Center (with Naoki Yamamoto as Center Head) installed in the Faculty of Science and Technology will provide a new focus for this research as one of Keio Advanced Research Centers.

About the IBM Q Network

The IBM Q Network is a worldwide group of organizations including Fortune 500 companies, academic institutions, national research labs, and startups collaborating with IBM to develop potentially valuable quantum computing applications. The IBM Q Network, announced in December 2017, provides access to IBM Q systems, scalable multipurpose quantum computers featuring the highest computational capability currently available (20 qubits), as well as access to a plethora of technical knowledge and resources via the cloud. A 50 qubit processor is currently under development and will be made available to the Network as the next generation of IBM Q systems.

Amanda Carl
IBM Media Relations
amcarl@us.ibm.com

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