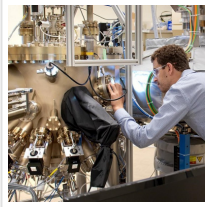


## Boeing Has Joined a Special Consortium for Quantum Mechanics Research



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Boeing has entered a consortium of several companies and research institutes for the development of quantum technology. Boeing is interested in developing quantum-based telecommunication systems. This program will help the company to achieve this goal.

The [Chicago Quantum Exchange](#), a growing intellectual hub for the research and development of quantum technology, has expanded its community to include new industry partners working at the forefront of quantum technology and research. These corporate partners are [Boeing](#), [Applied Materials, Inc.](#), [ColdQuanta, Inc.](#), [HRL Laboratories LLC](#), and [Quantum Opus LLC](#).

Together, the Chicago Quantum Exchange and its new industry partners will focus on developing a new understanding of the rules of quantum mechanics, leading to breakthroughs in quantum devices, materials and computing techniques.

Based at the University of Chicago's Pritzker School of Molecular Engineering, the Chicago Quantum Exchange is anchored by the University of Chicago, the U.S. Department of Energy's Argonne National Laboratory and Fermi National Accelerator Laboratory (both operated for DOE by the University of Chicago), and the University of Illinois at Urbana-Champaign, and includes the University of Wisconsin-Madison and Northwestern University.

"These new corporate partnerships represent an important step as we build the fabric of institutions—across private and public universities, national laboratories, and companies, and with local, state and federal support—essential for creating the nation's leading center for quantum information and quantum engineering more generally here in Chicago," said President Robert J. Zimmer.

Chicago Quantum Exchange member institutions will work with corporate partners in a

variety of ways. The partnerships could include collaborative research efforts, joint workshops and brainstorming sessions for new research directions, and student internship opportunities to help train the quantum workforce of the future.

New partners include:

1- [Boeing](#), the world's largest aerospace company and leading manufacturer of commercial jetliners, defense, space and security systems, has joined as a core partner by funding collaborative research with member institutions. Boeing's Disruptive Computing & Networks organization works on quantum communications and computing, as well as neuromorphic processing and advanced sensing.

2- [Applied Materials](#), the leader in materials engineering solutions used to produce virtually every new chip and advanced display in the world, has joined as a partner. Applied's expertise in modifying materials at atomic levels and on an industrial scale can help enable technology advancements across a broad range of applications.

3- [ColdQuanta](#), which develops and designs instruments and systems for quantum technology applications, will join as a partner. The company recently funded research at CQE member University of Wisconsin-Madison to develop core performance aspects of a quantum computer.

4- [HRL Laboratories](#), a research and development laboratory that specializes in advancing ultra-high-performance circuitry, robust computing and communications, automated data extraction, and innovative architected materials, has joined as a partner. HRL's quantum efforts include investigating spin-based semiconductor qubits as well as interfaces between qubits and photons.

5- [Quantum Opus](#), which develops novel products and services to enable researchers to make single-photon measurements with unmatched sensitivity, speed and precision, has joined as a partner. Quantum Opus may support the CQE community through student internships programs and research exchange.

IBM joined the CQE as its first industry core partner in April by supporting research on quantum engineering and computing, as well as up to five CQE postdoctoral researchers.

"These partnerships will help both academia and industry leverage each other's knowledge at the leading edge of quantum computing, communication and sensing," said David Awschalom, director of the Chicago Quantum Exchange, the Liew Family Professor in

Molecular Engineering at the University of Chicago, and an Argonne senior scientist. “Only by expanding our intellectual talents and research capabilities to partner with companies like these can we advance quantum research and continue to train top-notch scientists and engineers.”

“We are very pleased to participate in the Chicago Quantum Exchange,” said Charles Touns, vice president and general manager of Boeing’s Disruptive Computing & Networks organization. “We are looking forward to collaborating with members of the exchange and exploring how to harness discoveries in this rapidly expanding field to bring valuable applications for aerospace.”

“Applied Materials is excited to join the Chicago Quantum Exchange and bring our materials engineering expertise to help accelerate the quantum technology roadmap,” said Robert Visser, managing director in the Office of the CTO at Applied Materials. “We look forward to engaging with other member companies to explore collaboration opportunities that can get the industry ready for the quantum future.”

The mission of the CQE is to accelerate discovery and innovation in the rapidly developing areas of quantum technology, and to attract talent, funding and industry to the Chicago area to become the source for tomorrow’s leading quantum engineers.

Read the [original article](#) on The University of Chicago.