

MIT Industrial Liaison Program Faculty Knowledgebase Report

Quantum Computing: Opportunities and Challenges

July 28, 2020 11:00 am - 12:30 pm

11:00AM – 11:25AM

Introduction to Quantum Computing
William Oliver
Professor of Electrical Engineering and Computer Science (EECS)
Professor of Physics
MIT Lincoln Laboratory Fellow
Director, MIT Center for Quantum Engineering (CQE)
Associate Director, MIT Research Laboratory of Electronics (RLE)



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William D. Oliver is a Principal Investigator in the Engineering Quantum Systems Group (MIT campus) and the Quantum Information and Integrated Nanosystems Group (MIT Lincoln Laboratory). He provides programmatic and technical leadership targeting the development of quantum and classical high-performance computing technologies. Will's research interests include the materials growth, fabrication, design, and measurement of superconducting qubits, as well as the development of cryogenic packaging and control electronics involving cryogenic CMOS and single-flux quantum digital logic. Will is a Fellow of the American Physical Society; serves on the National Quantum Initiative Advisory Committee and the US Committee for Superconducting Electronics; is an IEEE Applied Superconductivity Conference (ASC) Board Member; and is a member of IEEE, APS, Sigma Xi, Phi Beta Kappa, and Tau Beta Pi.

Will received his PhD in Electrical Engineering from the Stanford University, the SM in Electrical Engineering and Computer Science from MIT, and a BS in Electrical Engineering and BA in Japanese from the University of Rochester (NY).

[View full bio](#)

11:25AM – 11:45AM

Government and Industry Perspectives

Government Policies:

Dr. Charles Tahan
Assistant Director for Quantum Information Science, Office of Science and Technology Policy
Director, National Quantum Coordination Office

Quantum Computing:

Dr. Erik Lucero
Quantum Engineering Hardware Lead and Site Lead Google Santa Barbara
Google AI Quantum Team

Control Software and Hardware:

Ms. Liz Ruetsch

GM, Quantum Engineering Solutions (QES), Keysight Technologies, Inc.

Quantum Algorithms:

Dr. Christopher Savoie

CEO, Zapata Computing

11:45AM – 12:30PM

Panel Discussion and Q&A