

# MIT Industrial Liaison Program Faculty Knowledgebase Report

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## 2021 Quantum Computing: Opportunities and Challenges

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June 22, 2021 1:00 pm - 3:00 pm

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1:00 PM - 1:20 PM

Introduction to Quantum Computing

William Oliver

Professor of Electrical Engineering and Computer Science (EECS) (from July 2021)

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 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](#)

1:20 PM - 2:00 PM

Industry Perspectives

Quantum Computing:

Matt Trevithick

COO, Google Quantum AI

Google

Control Software and Hardware:

Liz Ruetsch

GM, Quantum Engineering Solutions (QES)

Keysight Technologies, Inc.

Manufacturing:

Ken Kennedy

Manager IT Innovation and Research

BMW Group

Marcin Ziolkowski

Artificial Intelligence and Emerging Technologies Expert

BMW Group

Quantum Algorithms:

Christopher Savoie  
CEO  
Zapata Computing

2:00 PM - 2:10 PM

Government Perspective

Corey Stambaugh  
Senior Policy Advisor, National Quantum Coordination Office  
White House Office of Science and Technology Policy

2:10 PM – 3:00 PM

Panel Discussion and Q&A