

Ming Hsieh Institute - Physics

## **Joint Seminar Series**



## **Building Quantum Systems at Universities**

Kenneth Brown Electrical & Computer Engineering, Physics, and Chemistry Duke University

Date: Friday, April 25, 2025 Time: 2pm – 3:30pm EEB 132 & Zoom <u>https://usc.zoom.us/j/92394501475?pwd=xmrBvQLybbTORjh79PVFav4Abrzeba.1</u> Meeting ID: 92394501475/ Passcode: 637467

Refreshments will be served

**Abstract**: Quantum computers have improved dramatically as industry has pushed the capability of these devices in terms of both scale and quality. Continued improvement requires research at all levels of the stack from the physical control of qubits to the software-layer that executes programs. Quantum systems at universities enable scientists and engineers to optimize over all these levels and to test new frameworks for quantum system design. In this talk, I will discuss how varying levels of access to quantum computers at companies, national laboratories, and universities enable different kinds of research.



**Biography**: Kenneth Brown is the Michael J. Fitzpatrick Distinguished Professor in the Departments of Electrical & Computer Engineering, Physics, and Chemistry at Duke University. He is an expert in quantum information science and engineering, and he uses the control of quantum systems to develop new technologies and understand the natural world. His research interests are ion trap quantum computers and quantum error correction. He serves on the American Physical Society Council of Representatives for the Division of Quantum Information. He was named a Fellow of the American Physical Society, a Kavli Fellow, and an Experienced Research Fellow of the Alexander von Humboldt Foundation for his work in quantum information.