UCI Samueli School of Engineering

Department of Materials Science and Engineering UCI

UNIVERSITY OF CALIFORNIA, IRVINE

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

IS PROUD TO HOST A SEMINAR BY

"IMPROVING COHERENCE IN SUPERCONDUCTING QUBITS FOR QUANTUM COMPUTING"

SUHAS GANJAM

RESEARCH SCIENTIST
GOOGLE QUANTUM

Thursday, May 21, 2026

2:00 PM - 3:20 PM

McDonnell Douglas Engineering Auditorium

Abstract: Quantum computing is an emerging technology that has the potential to revolutionize the world of computation. By exploiting the inherent "weirdness" of quantum mechanics, a quantum computer can solve certain problems exponentially faster than a conventional supercomputer. In this talk I will describe one of the most promising platforms for quantum computation: superconducting qubits. I will provide a general overview of how qubits are physically realized and controlled within the circuit QED framework, and discuss the idea of coherence, the physical metric that ultimately limits qubit performance, and how materials and fabrication processes dictate the performance of large-scale quantum circuits.

Bio: Suhas is a research scientist at Google Quantum AI. He received his BA in physics from UC Berkeley and PhD in physics from Yale University. His research focuses on improving the coherence of superconducting quantum circuits in a predictable way using materials and geometry optimization. His work lies in the intersection of materials science, process development, and microwave losses in superconducting circuits.