



## Physical Sciences Seminar

# Next Generation Superconducting Circuits

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Host: Johannes Fink

Superconducting circuits are a promising platform for quantum computing. With long coherence times, strong light-matter interactions on-chip, circuit design flexibility and relative ease of fabrication, superconducting qubits have enabled some of the most advanced demonstrations of quantum computing to date. Despite advances in qubit performance, qubit error rates are still too high to realise large-scale quantum computing with realistic hardware overheads. In this talk, I will discuss work on the development of new types of protected qubits in superconducting circuits, which possess inherent immunity to errors. I will also discuss how the integration of hybrid superconducting circuits can help overcome key challenges in alternative platforms, with a focus on spin-based quantum computing.

**Wednesday, November 13, 2024 09:30am - 10:30am**

Mondi Seminar Room 2, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.