

**The Hebrew University of Jerusalem , Condensed-Matter
Physics Seminar**

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Danciger B Building, Seminar room

"Majorana fermions in the superconducting qubit architecture"

Solid state Majorana fermions are generating intensive interest due to their unique properties and possible applications in fault tolerant quantum memory devices. In this talk I will propose a method to detect signatures of Majorana fermions in hybrid devices by employing the sensitive apparatus of the superconducting charge-qubit architecture and its efficient coupling to microwave photons. I will describe robust signatures of the underlying Majorana fermions that are, remarkably, not washed out by the smallness of the Majorana contribution to the Josephson current.