

**Title:** Topological superconductivity at the edge of bismuth bilayer

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**Abstract:**

Localized Majorana zero modes (MZMs) are non-Abelian quasiparticles that emerge at the ends of one-dimensional topological superconductors, which are promised to be a building block of fault-tolerant quantum computation. To date, a variety of condensed matter systems is proposed and studied to engineer topological superconductivity and MZMs. This talk will introduce the concepts of topological superconductor and MZMs, and how to use MZMs as fault-tolerant quantum computation. More specifically, I will review the recent experimental and theoretical progress in the study of MZMs at the edge of the bismuth bilayer platform and discuss how to engineer a new platform to host MZMs.

**References:**

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