
Topological superconductivity between one and two dimensions

Ady Stern*¹

¹Weizmann Institute of Science – Rehovot 76100, Israel

Abstract

In this talk I will describe the way that two dimensional Josephson junctions may be employed to create one dimensional topological superconductors and describe the unique properties of the resulting system. These properties include robust topological superconductivity and self-tuning of the system to the topological regime. I will discuss the interplay of topological superconductivity in these junctions with disorder and with screening currents, and possible relations to existing experiments.

My collaborators in this work are Anna Keselman, Falko Pientka, Arbel Haim, Erez Berg, Bert Haleprin and Amir Yacoby (Weizmann, Harvard, U. Chicago, Microsoft's Station Q).

*Speaker