W2S Seminar
(Webinar series on Spintronics)

Coupling Topological Solitons in Hybrid Quantum Architectures

Speaker:
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Abstract

We created hybrid materials in which superconductivity and magnetism interact through their particle-like topological excitations. Skyrmions inject flux tubes into superconductors, creating a bound pair of topological solitons. This flux forms antivortices, which modify the net magnetization of our materials and their flux dynamics. We also detect signatures of circulating spin-polarized supercurrents. The observed coupling of spin and flux topologies demonstrates the viability of such architectures for engineering nontrivial topology in quantum matter and a recipe to create and study topological superconductivity.

To attend the lecture please visit
Zoom link: https://zoom.us/j/94590446340

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