

Symposium Topological Superconductor-Magnet Heterostructures (SYTS)

jointly organised by
 the Low Temperature Physics Division (TT),
 the Magnetism Division (MA), and
 the Metal and Material Physics Division (MM)

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Superconductivity and magnetism have been usually regarded, in a rather pessimistic sense, as antagonistic. Nevertheless, phenomena arising from the competition between them have captivated physicists for almost a century. Nowadays, we are at the verge of a paradigm shift where we can embrace the synergy between superconductivity and magnetism. In fact, owing to recent advances in sample fabrication together with guiding principles from topology, it is now possible to engineer novel superconductor-magnet hybrid systems. These are unique platforms for exotic topological states whose fascinating properties can be exploited, for example, for topological quantum computing. The goal of this symposium is to bring together the community of this burgeoning field to strengthen the communication line between theorists and experimentalists from various divisions, to collaboratively identify challenges and set the research agenda for the coming years.

Overview of Invited Talks and Sessions

(Lecture hall HSZ 01)

Invited Talks

SYTS 1.1	Thu	15:00–15:30	HSZ 01	Blending of superconductivity and magnetism via topological solitons — ●CHRISTOS PANAGOPOULOS
SYTS 1.2	Thu	15:30–16:00	HSZ 01	Topological landscaping in magnet-superconductor heterostructures — ●SEBASTIÁN A. DÍAZ
SYTS 1.3	Thu	16:00–16:30	HSZ 01	Experimental study of minigaps and end states in bottom-up designed multi-orbital Shiba chains — ●JENS WIEBE
SYTS 1.4	Thu	16:45–17:15	HSZ 01	Quantum spins and hybridization in artificially-constructed chains of magnetic adatoms on superconducting 2H-NbSe₂ — ●KATHARINA J. FRANKE
SYTS 1.5	Thu	17:15–17:45	HSZ 01	Braiding of Majorana zero modes — ●STEPHAN RACHEL

Sessions

SYTS 1.1–1.5	Thu	15:00–17:45	HSZ 01	Topological Superconductor-Magnet Heterostructures
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