

Symposium Novel phases and dynamical properties of magnetic skyrmions (SYMS)

jointly organised by
the Low Temperature Physics Division (TT),
the Magnetism Division (MA),
the Surface Science Division (O), and
the Crystalline Solids and their Microstructure Division (KFM)

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The discovery of skyrmions in cubic chiral ferromagnets over a decade ago, featuring non-trivial topological winding and greatly enhanced sensitivity to spin transfer torques, stimulated intense research into the suitability of skyrmions for technical applications. The symposium focusses on the recent identification of symmetry-broken phases and new forms of driven dynamical states of skyrmions in ferromagnetic host materials vis a vis the discovery of skyrmionic order in geometrically frustrated and antiferromagnetic magnets and their dynamical properties. The symposium this way highlights the intimate relationship of non-trivial topology and exceptional spin dynamics in different skyrmion-hosting systems.

Overview of Invited Talks and Sessions

(Lecture hall Audimax 2)

Invited Talks

SYMS 1.1	Tue	10:00–10:30	Audimax 2	Imaging skyrmions in synthetic antiferromagnets by single spin relaxometry — ●AURORE FINCO
SYMS 1.2	Tue	10:30–11:00	Audimax 2	Microwave spectroscopy of the skyrmionic states in a chiral magnetic insulator — ●AISHA AQEEL, JAN SAHLIGER, TAKUYA TANIGUCHI, STEFAN MAENDL, DENIS METTUS, HELMUTH BERGER, ANDREAS BAUER, MARKUS GARST, CHRISTIAN PFLEIDERER, CHRISTIAN H. BACK
SYMS 1.3	Tue	11:15–11:45	Audimax 2	Archimedean Screw in Driven Chiral Magnets — ●NINA DEL SER
SYMS 1.4	Tue	11:45–12:15	Audimax 2	Frustration-driven magnetic fluctuations as the origin of the low-temperature skyrmion phase in $\text{Co}_7\text{Zn}_7\text{Mn}_6$ — ●JONATHAN WHITE, VICTOR UKLEEV, KOSUKE KARUBE, PETER DERLET, CHEN-NAN WANG, HUBERTUS LUETKENS, DAISUKE MORIKAWA, AKIKO KIKKAWA, LUCILE MANGIN-THRO, ANDREW WILDES, YUICHI YAMASAKI, YUICHI YOKOYAMA, LE YU, CINTHIA PIAMONTEZE, NICOLAS JAOUEN, YUSUKE TOKUNAGA, HENRIK RØNNOW, TAKA-HISA ARIMA, YOSHINORI TOKURA, JONATHAN WHITE
SYMS 1.5	Tue	12:15–12:45	Audimax 2	Magnetic Skyrmions as Topological Multi-Media Influencers — ●SEBASTIÁN A. DÍAZ

Sessions

SYMS 1.1–1.5	Tue	10:00–12:45	Audimax 2	Novel phases and dynamical properties of magnetic skyrmions
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