Symposium Correlated Quantum Matter – From Cold Atoms to the Solid State (SYCQ)

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Correlated quantum matter displays some of the most intriguing phenomena - from strange metallicity and quantum spin liquid behavior to topological order - that escape our understanding. Massive or long-range entanglement might be a common characteristic of the underlying states but the verification is challenging, in particular in condensed matter systems. New approaches inspired by quantum information have the potential to boost progress. This symposium will bring together experts from the fields of ultracold atoms, mesoscopic systems, and quantum materials, to stimulate cross-talk between the communities, generate new ideas, and contribute to establishing a new field at the junction between correlated matter and quantum information.

Overview of Invited Talks and Sessions

(Lecture hall ZHG008)

Invited Talks

SYCQ 1.1	Tue	10:45–11:15	ZHG008	**New synthetic quantum systems with ultracold fermions in optical lattices** — •Leonardo Fallani
SYCQ 1.2	Tue	11:15–11:45	ZHG008	**Realization of Andreev-molecules** — •Szabolcs Csonka
SYCQ 1.3	Tue	11:45–12:15	ZHG008	**Giant transverse magnetic fluctuations at high fields in UTe_2** — •Kimberly Modic, Valeska Zambra, Amit Nathwani, Brad Ramshaw
SYCQ 1.4	Tue	12:15–12:45	ZHG008	**Emerging platforms to answer basic theoretical questions about correlated quantum matter** — •Joel Moore

Sessions

SYCQ 1.1–1.4	Tue	10:45–12:45	ZHG008	**Correlated Quantum Matter – From Cold Atoms to the Solid State**