

Symposium Quantum 2D-Moiré and Rhombohedral van-der-Waals Systems (SYWS)

Thomas Weitz
University of Göttingen
Friedrich-Hund-Platz 1
37077 Göttingen, Germany
thomas.weitz@uni-goettingen.de

Sirri Batuhan Kalkan
University of Göttingen
Friedrich-Hund-Platz 1
37077 Göttingen, Germany
sbkalkan@uni-goettingen.de

Recent advancements in the field of 2D-Moiré and rhombohedral van-der-Waals systems have significantly enriched the landscape of quantum materials. These versatile platforms allow the creation and control of flat bands and enable tunable quantum phase diagrams – critical for advancing quantum technologies. The tuning of flat bands, either through precise control of the Moiré angle or by introducing an external electric field, has enabled the discovery of various emergent phenomena such as (fractional) Chern insulators, ultrafast exciton dynamics, and superconductivity. The symposium will showcase complementary experimental and theoretical approaches to uncover and control such complex electronic states in novel van-der-Waals heterostructures.

Overview of Invited Talks and Sessions

(Lecture hall ZHG008)

Invited Talks

SYWS 1.1	Thu	10:45–11:15	ZHG008	Twisted transition metal dichalcogenides for new topological states — •JIE SHAN
SYWS 1.2	Thu	11:15–11:45	ZHG008	Exciton dynamics in 2D-moiré materials in space and time — •STEFAN MATHIAS
SYWS 1.3	Thu	11:45–12:15	ZHG008	Fractional Quantum Anomalous Hall Effect and Chiral Superconductivity in Graphene — •LONG JU
SYWS 1.4	Thu	12:15–12:45	ZHG008	Electron Correlations in Moiré vs. Moiréless Quantum Matter — •TIM WEHLING

Sessions

SYWS 1.1–1.4	Thu	10:45–12:45	ZHG008	Quantum 2D-Moiré and Rhombohedral van-der-Waals Systems
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