Seminar/Talk

Magnonic superconductivity

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Host: Maksym Serbyn

We uncover a new superconducting state with partial spin polarization induced by a magnetic field. This state, which we call "magnonic superconductor", lacks a conventional pairing order parameter, but is characterized instead by a composite order parameter that represents the binding of electron pairs and magnons. We rigorously demonstrate the existence of magnonic superconductivity with high transition temperature in one- and two-dimensional Hubbard models with repulsive interaction. We further show that magnonic Cooper pairs can attract to form higher-charge bound states, which can give rise to charge-6e superconductivity.

Friday, July 26, 2024 11:00am - 12:00pm
Office Building West/Ground Floor/Heinzel Seminar Room

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.
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