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# EINLADUNG zum IFP-SEMINAR

**Probing and molding Dirac fermions with magnetic field**

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Host: Silke Bühler-Paschen  
Termin: Mittwoch, 14. November 2018, 16:00 Uhr  
Ort: Institut für Festkörperphysik, TU Wien  
Wiedner Hauptstraße 8-10, 1040 Wien  
Seminarraum DC rot 07 (roter Bereich, 7. OG)

Abstract:

Graphene and topological insulator – perhaps most celebrated materials of the last decade – host excitations described by the massless Dirac equation. Although many exciting effects related to the quasi-relativistic nature of carriers in these materials have already been observed, the hunt for Dirac fermions remains very active and has recently brought new surprises. In this talk I will discuss how synergy between theory and experiments have lead to new implementations of the Dirac equation in trilayer graphene and topological crystalline insulator, which offer greater tunability and can be a promising platform for studying effects of interactions in Dirac systems. I will highlight different symmetries which control behavior of these Dirac fermions, and demonstrate how their physical properties can be probed and modified with a magnetic field and other perturbations.