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EINLADUNG zum IFP-SEMINAR

Thema: **Correlation Effects on Topological Insulators**

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Host: Karsten Held

Termin: **Montag, 16 September 2013, 15 Uhr**

Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum 138C, 9. OG (gelbe Leitfarbe)

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Abstract:

Topological insulators have attracted much attention as a new research platform in condensed matter physics. We discuss the correlation effects on topological insulators by applying dynamical mean field theory to a generalized Bernevig-Hughes-Zhang model (i.e. a correlated two-band model with spin-orbit interaction). We discuss (i) an interaction-driven phase transition between the topological and Mott insulators, (ii) a topologically non-trivial antiferromagnetic insulator and (iii) a new exotic phase "spin-selective topological Kondo insulator", where a topological Kondo insulator is embedded in a ferromagnetic metal.



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