Quantum oscillations and Hall anomaly of surface states in
the topological insulator Bi$_2$Te$_3$

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Following a brief introduction to topological insulators (TIs), I will describe difficulties with transport experiments, compared with spectroscopic experiments on TIs. Recent progress in identifying the Shubnikov de Haas of the surface state in Bi$_2$Te$_3$ will be reported.

The enhanced surface mobility produces a characteristic low-field Hall anomaly. Experiments on gated crystals are also described.

I will close with an overview of other materials and future directions.