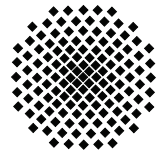


# Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung  
Max-Planck-Institut für Intelligente Systeme  
Fachbereich Physik, Universität Stuttgart

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Dienstag, 29. Oktober 2013

17.15 Uhr

Hörsaal 2 D5

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

## Topological Insulators and Superconductors: Materials Frontier

**Yoichi Ando**

Institute of Scientific and Industrial Research; Osaka University

### Abstract

Topological insulators and superconductors are new quantum states of matter that are characterized by nontrivial topological structures of the Hilbert space. Recently, they attract a lot of attention because of the appearance of exotic quasiparticles such as spin-helical Dirac fermions or Majorana fermions on their surfaces, which hold promise for various novel applications. In this colloquium, I will introduce the basics of those materials and present some of the breakthroughs we have made in this new materials frontier.