

**Mathematisch – Naturwissenschaftliche Fakultät**  
der Universität zu Köln  
- Der Dekan -

# **Einladung**

zu der am Dienstag, den 12. April 2016, um 16:45 Uhr  
im Hörsaal III der Physikalischen Institute Köln,  
Zülpicher Straße 77

stattfindenden öffentlichen

## **Antrittsvorlesung**

von Herrn

**Prof. Dr. Yoichi Ando**

(II. Physikalisches Institut)

über das Thema

### **Topological Insulators and Superconductors**

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 key contributions we have made in this new frontier.

A. Büschges  
Dekan