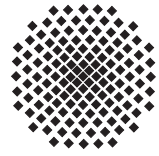


Stuttgarter Physikalisches Kolloquium

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

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Dienstag, 16. Januar 2018

17.15 Uhr

Hörsaal 2 D5

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

Second-order topological insulators and superconductors

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Abstract

Topological insulators combine an insulating bulk with gapless states at their boundaries. This talk introduces "second-order topological insulators", which are crystalline insulators with a gapped bulk and gapped crystalline boundaries, but topologically protected gapless states at the intersection of two boundaries. I'll show that reflection symmetry can be employed to systematically generate examples of second-order topological insulators and superconductors, although the topologically protected states at corners (in two dimensions) or at crystal edges (in three dimensions) continue to exist if reflection symmetry is broken.