The complete topological classification of gapped states of matter in the presence of reflection symmetry

Luka Trifunovic[*1] and Piet Brouwer[1]

[1]Freie University Berlin – Arnimallee 14, 14195 Berlin, Allemagne, Germany

Abstract

We obtain the complete classification of the reflection symmetric topological insulators and su-
perconductors using relative homotopy groups and exact sequences. The definition of topo-
logical
indices and corresponding generators are provided. Additionally, we address the issue of
"subtle
instability" of the second descendant Z2 phase the presence of disorder.

[*]Speaker