Contribution ID: **47** Type: **Talk**

Domain-wall/overlap fermion and topological insulators

Friday, 17 July 2015 14:20 (20 minutes)

Topological insulators are a new class of materials which have gapped spectra in the bulk, but are accompanied by topologically protected gapless excitations at the surface (edge) of the system. These phenomena have a close relationship with symmetry and dimensionality of the system through quantum anomalies. We point out that such a surface state is a physical realization of the domain-wall/overlap fermion. From this point of view, we discuss its implications for experiments of topological insulators. We also discuss an unconventional overlap fermion, which is suggested by the "periodic table" of topological insulators and superconductors.

Primary author: Dr KIMURA, Taro (RIKEN)

Co-author: Dr MORIMOTO, Takahiro (RIKEN)

Presenter: Dr KIMURA, Taro (RIKEN)

Session Classification: Applications Beyond QCD

Track Classification: Applications Beyond QCD