

# The 317<sup>th</sup> MANA Special Seminar



## Topological phases and bulk-edge correspondence

Chair: Dr. Xiao Hu (MANA PI)



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Quantum/spin liquids are states without any fundamental symmetry breaking. They are featureless as a bulk but some of them possess characteristic boundary states with edges or impurities. Historical and typical examples are quantum Hall states and Haldane spin chain. Quantum spin Hall states as the topological insulators also belong to it. Many of them are topologically nontrivial and it implies the existence of edge states and vice versa. This is the bulk-edge correspondence, which is further applied for variety of quantum states such as graphene, anisotropic-superconductors, cold atoms and photonics crystals. We will explain idea of topological phases and the bulk-edge correspondence supplemented with examples.

**Venue: Auditorium, 1F, WPI - MANA Bldg.**

**Namiki site**

**Date: March 6<sup>th</sup>, Wednesday Time: 16:30-17:15**

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