



Contribution ID: 214

Type: **Talk**

【616】 Hopf Insulators: Localized Representation and Observable Phenomena

Tuesday 27 August 2019 18:15 (15 minutes)

Despite being predicted more than a decade ago, Hopf insulators still have no realistic candidate material realization. The problem with finding such material is two-fold: Most importantly, the corresponding topological invariant - integer-valued Hopf number - is only defined for a two-band system, while another source of the problem stems from the assumed absence of any symmetry required to protect the Hopf phase. Apart from that, it is also not clear which properties of a Hopf insulator can be measured in order to find candidate compounds from the physical response. In this work, we address these problems and discuss physical aspects that should allow for the search of the Hopf insulator compounds.

Authors: NELSON, Aleksandra (UZH); Dr ALEXANDRADINATA, Aris (University of Illinois at Urbana-Champaign); SOLUYANOV, Alexey (ETH Zurich)

Presenter: NELSON, Aleksandra (UZH)

Session Classification: MaNEP: Correlations and topology in quantum matter

Track Classification: MaNEP Session: Correlations and topology in quantum matter