

Amorphous topological metals

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Abstract: Topological metals display physical phenomena different to conventional metals. These include Fermi-arc surface states, approximately quantised photoconductivity and negative magnetoresistance. However, all known topological metallic solids are crystalline. What is a meaningful definition of topological metals in non-crystalline solids? Do their Weyl nodes come in pairs? Can we enforce topology in non-crystalline metals? In this talk I will discuss these questions by proposing tools to define topological metals without translational symmetry. I will discuss some possible material realisations and physical principles to enforce them.

References

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Figures

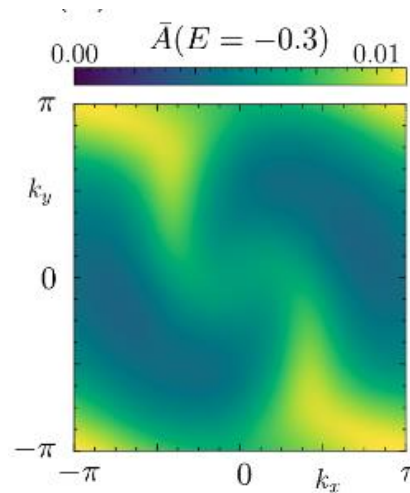


Figure 1: Spectral function of an amorphous topological metal
