Topological Order in Insulators : Two Examples

David Carpentier*[1]

[1]Laboratoire de Physique de l'ENS Lyon (Phys-ENS) – CNRS : UMR5672, École Normale Supérieure - Lyon – 46 allée d'Italie 69007 Lyon, France

Résumé

In this talk, I will illustrate the notion of topological band theory on simple 2 and 4 band models. Two possible origins of topological order in a band insulator will be discussed using the examples of the random Quantum Spin Hall phase in graphene on one hand, and the topological insulating phase of strained Mercury Telluride on the other hand. I will discuss recent ARPES data in this second example.

*Intervenant