

SPEAKER:

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TITLE:

Dirac operators and topological insulators

ABSTRACT:

This talk will focus on Dirac operators that emerge when studying macroscopic transport between topological insulators. I will analytically construct canonical edge states: coherent states that propagate along interfaces, but do not admit natural counter-propagating companions. I will illustrate the results with various numerical simulations. Joint work with G. Bal, S. Becker, C. Fermanian Kammerer, J. Lu and A. Watson.