



Miércoles, 2 de noviembre de 2016.

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Periodic Approximations to Aperiodic Hamiltonian

Abstract:

Computing the spectrum of a Schrödinger operator with space periodic coefficients was solved in 1928 by Bloch extending the Floquet theory to higher dimensions. No such method exists for material which are not periodic. The strategy offered here is to figure out how to approximate such an operator by periodic ones without introducing hidden defects liable to be present in the spectrum. The approximation theory for one such operator will be described in detail. Then using families of operators, or their C^* algebra will be shown to be easier to handle. Using the concept of groupoid and of its universal extension, a new tool of topology is offered to control these approximations. The concept of Vietoris and Fell topologies will be essential. In some specific cases, like subshifts, or their higher dimensional extensions, a complete characterization of system that are approximable by periodic ones will be offered.



Univ. Carlos III de Madrid



Coordenadas

Hora 11:00 - 12:00
Lugar Seminario del Departamento
Aula 2.2D08 Edificio Sabatini.

Dirección

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