



Mês de: Maio 2009

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 28 de Maio (quinta-feira), às 14h15, na Sala B3-01

“Nodal sets of magnetic Schroedinger operators of Aharonov--Bohm type and energy minimizing partitions”

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Abstract:

We analyze the nodal set of the stationary solutions of a Schroedinger operator, in dimension two, in presence of a magnetic field of Aharonov--Bohm type, with semi--integer circulation. We determine a class of solutions such that the nodal set consists of regular arcs, connecting the singular points with the boundary. In the particular case of one singular point, we prove that the nodal regions, whenever they dissect the domain in three components, satisfy a minimal partition principle. Moreover we prove that such a configuration is unique and depends continuously on the data.

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