A diamagnetic inequality for semigroup differences

Dirk Hundertmark
California Institute of Technology

Recently several groups (Nakamura, Doi et al, and Hupfer et al) showed that the integrated density of states for random Schrödinger operators with magnetic fields is independent of the boundary conditions used in its construction.

This result is well-known without magnetic fields. We will give a short proof of it in the magnetic case by reducing it to the non-magnetic case via a diamagnetic inequality for the difference of the Neumann and Dirichlet semigroups. (Joint work with Barry Simon.)