

MIT/HARVARD ANALYSIS SEMINAR

Laszlo Erdos

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will speak on:

"Magnetic Lieb-Thirring inequalities"

Date : *Friday, February 24, 2006*

Time : *4:15-5:15pm*

Location: *Science Center, Room 222*

Abstract: The Pauli operator describes the energy of a nonrelativistic quantum particle with spin-1/2 in a magnetic field and an external potential. Bounds on the sum of the negative eigenvalues are called magnetic Lieb-Thirring (MLT) inequalities. The main feature of our estimate, compared to earlier results, is that in the large field regime it grows with the optimal (first) power of the strength of the magnetic field. As a byproduct of the method, we also obtain optimal upper bounds on the pointwise density of zero energy eigenfunctions of the Dirac operator. This is a joint work with J.P. Solovej.