
GEOMETRIC LOWER BOUND FOR THE FIRST MAGNETIC NEUMANN EIGENVALUE IN THE PLANE

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I consider the eigenvalues of the magnetic Laplacian on a bounded domain of the plane with uniform magnetic field. After introducing the problem, in the first part of the talk, I will give a series of examples to describe the behaviour of the ground state (the first eigenvalue). In the second part, for smooth domains, I will prove a lower bound of the ground state depending only on the intensity of the magnetic field and the rolling radius of the domain.

This is part of a joint work with Corentin Léna, Luigi Provenzano and Alessandro Savo.