« Atelier sur la mécanique quantique à N corps »
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The Laughlin liquid in an external potential

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We study perturbations of the Laughlin state arising from the effects of trapping and disorder. These are N-particle wave functions that have the form of a product of the Laughlin state and an analytic function of the N variables. We derive an upper bound to the ground state energy in a confining external potential of arbitrary shape, matching exactly a recently derived lower bound in the large N limit.

This is joint work with Nicolas Rougerie.

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