Bertrand I. Halperin
Harvard

“Spin Superfluidity in the $\nu = 0$ Quantum Hall State of Graphene”

Abstract: The ground state of neutral monolayer graphene in a strong perpendicular magnetic field is believed to be the so-called “canted antiferromagnetic $\nu = 0$ Quantum Hall State.” This state is an insulator for charge transport, but it should behave like a superfluid for transport of the spin component parallel to the magnetic field. We have proposed an experiment to demonstrate this effect.