



ICTS Seminar

Title : An exactly solvable model of interacting electrons in a magnetic field

Speaker : Sreejith G J (IISER Pune)

Date : Wednesday, June 16, 2021

Time : 3:00 pm (IST)

Abstract : We present a model Hamiltonian for spinless electrons in a magnetic field with strong short-range interaction that lends itself to exact solutions for all low-energy states at arbitrary filling factor $\nu < 1/2p$. The model produces incompressible states at $\nu = n/(2pn+1)$, where n and p are integers - precisely the filling fractions where fractional quantum Hall effect occurs. We present numerical evidence showing that the fractional quantum Hall ground states of this model are adiabatically connected, and thus topologically equivalent to the Coulomb ground states in the lowest Landau level. Lastly we present the numerical results for the torus geometry and end with a few questions we couldn't find answers to.

Venue : Please click on the below link to join the meeting

<https://zoom.us/j/95007689841?pwd=QjBoZDBWN2F3TDNOa1ZqV1ZTVnJwdz09>

Meeting ID: 950 0768 9841

Passcode: 724926

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