Semyon Klevtsov

Title: Geometry and large N asymptotics in Quantum Hall states

Abstract:

Quantum Hall states are N-particle wave functions, successfully describing the fractional quantum Hall effect (QHE). It was understood early on, that much can be learned about QHE when QH states are considered on a Riemann surface. We study adiabatic transport of QH states on moduli spaces and their geometric responses to the Riemannian metric, magnetic potential function, singularities -- for the large number of particles N. We will discuss the Hall viscosity, Hall central charge and topological phases from this point of view.