Entanglement spectra in fractional quantum Hall states

Maria Hermanns (Princeton University)

Fri Jan 27 14:00 2012 (Seminar Room)

Abstract

Over the last years there has been a lot of interest in topological phases of matter, because of new theoretical and experimental developments. These topologically ordered systems cannot be uniquely classified by conventional methods, such as symmetry or a local order parameter. Instead one has to resort to other methods, an example of which is the entanglement spectrum. In my talk, I review the notion of entanglement spectrum and show, using the example of fractional quantum Hall states, how to obtain information about the topological properties of the system via the entanglement spectrum.