

TITLE: Entanglement entropy in fermionic Laughlin states

ABSTRACT:

We present calculations of the bipartite entanglement entropy in fractional quantum Hall states of the fermionic Laughlin sequence. The partitioning of the system is done both by dividing Landau level orbitals and by grouping the fermions themselves. For the case of orbital partitioning, our results can be related to spatial partitioning, enabling us to extract a topological quantity (the ‘total quantum dimension’) characterizing the Laughlin states.