筑波大学
University of Tsukuba

Condensed Matter Seminar
物性論セミナー

2017年12月28日 (木), Dec.28 (Thu), 2017
14:00-15:00
自然系学系棟B棟６階: ６０２号室
[地図]

Abelian topological order in three-dimensional space

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Starting from an array of interacting fermionic quantum wires, we construct a family of non-Abelian topologically ordered states of matter in three spatial dimensions (3D). These states of matter inherit their non-Abelian topological properties from the $su(2)_k$ conformal field theories that characterize the constituent interacting quantum wires in the decoupled limit. Thus, the resulting topological phases can be viewed as 3D generalizations of the (bosonic) $su(2)_k$ Read-Rezayi sequence of fractional quantum Hall states.

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