CMTC

Condensed Matter Theory Center Seminar

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(Microsoft Q and Stanford)
Tuesday, January 19
11:00 AM-12:30 PM
2202 Physics Building

"Topological superconductors"

Topological superconductors are fully gapped superconductors with robust gapless states propagating on the boundary. The classic example of topological superconductor is the p+ip wave superconductor in 2 spatial dimensions. In this talk, I will review the topological classification and physical properties of time-reversal invariant topological superconductors, for which the He3B phase is a physical example. A general formula is obtained in all physical spatial dimensions 1, 2 and 3, from which the topological classification of topological superconductors can be determined by Fermi surface properties. As a consequence of the nontrivial topology, the system has an emergent "supersymmetry". I will also discuss about the quantum entanglement in topological superconductors.