



Mathematics > Geometric Topology

A tour of bordered Floer theory

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Heegaard Floer theory is a kind of topological quantum field theory, assigning graded groups to closed, connected, oriented 3-manifolds and group homomorphisms to smooth, oriented 4-dimensional cobordisms. Bordered Heegaard Floer homology is an extension of Heegaard Floer homology to 3-manifolds with boundary, with extended-TQFT-type gluing properties. In this survey, we explain the formal structure and construction of bordered Floer homology and sketch how it can be used to compute some aspects of Heegaard Floer theory.

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