HEEGAARD FLOER HOMOLOGY IN LOW-DIMENSIONAL TOPOLOGY

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Time：Wed., Nov. 11th, 14:00-14:30
Venue: Room 102, SCMS

Abstract:

We study a family of 3- and 4-dimensional topological invariants obtained from Heegaard Floer theory. More specifically, we apply these invariants to study the knot concordance group, contact topology and open book decomposition, etc. We find interesting connections between concordance invariants from Heegaard Floer theory and properties of open book decompositions of the 3-manifold.

A novel tool called involutive Heegaard Floer homology is recently developed by Hendrick and Manolescu. While having many similar properties, it does provide more powerful invariants than ordinary Heegaard Floer homology. We look forward to further extracting novel concordance invariants and exploring their connections with contact structures.