
Introduction to Heegaard Floer homology

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Résumé

Heegaard Floer homology is a powerful invariant of three manifolds introduced by Ozsváth and Szabó. In my course I will give an overview of its definition and of some of its properties following Lipshitz's "cylindrical reformulation" rather than Ozsváth and Szabó's original presentation. Since this course is meant to be an introduction to Golla's and Watson's courses of the second week, the focus will be on foundations rather than applications. The approximate plan of the lecture is:

1. Overview and topological preliminaries
2. Definition of the Heegaard Floer chain complexes
3. Definition of the cobordism maps
4. Surgery exact sequence and computations

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