



Department of Mathematics
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Seminar

Heegaard Floer homology for embedded bipartite graphs and its properties

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Abstract

The Heegaard Floer homology for knots and links defined by Ozsváth and Szabó, and independently Rasmussen has made great impacts on knot theory. It has also been widely used to study the properties of the manifolds obtained from Dehn surgeries. As a generalization, in this talk, we introduce the construction of the minus-version and hat-version of the Heegaard Floer homology for a balanced bipartite graph with a balanced orientation in a closed oriented homology 3-sphere. A link, in particular, is a bipartite graph.

When the ambient manifold is the 3-sphere, we can study the homology from a graph projection of the given graph. In this case, the generators of the Heegaard Floer complex correspond to the “states” of the given graph projection. We discuss some properties of the chain complex for some special graph projections.

Date : September 13, 2016 (Tuesday)
Time : 4:00p.m. – 5:00p.m.
Venue : Room 222, Lady Shaw Building,
The Chinese University of Hong Kong

All are Welcome