1107-57-486   **Carl Hammarsten*** (`chammar@gwu.edu`). *Strip Diagrams and Combinatorial Heegaard Floer homology.*

Given a 3-dimensional closed manifold Y presented by its branched spine, we construct a canonical Heegaard decomposition for Y. We present this decomposition graphically in the form of a Strip Diagram. Using strip diagrams we combinatorially construct a chain complex we have shown is homotopically equivalent to the Heegaard Floer chain complex CF-hat of Y, yet significantly smaller. Furthermore, we show that strip diagrams have nice properties which greatly simplify the calculation of Heegaard Floer homology. Finally, we consider the presentation of a branched spine by its O-graph and show that reformulating our definition in these terms gives a clock-state type description for HF-hat of Y. (Received January 21, 2015)

1