

1079-54-236

**Matthew Graham\*** ([mdgraham@brandeis.edu](mailto:mdgraham@brandeis.edu)), Brandeis University, 415 South St, Mathematics Department, Waltham, MA 02454. *Grid Movie Moves and Combinatorial Knot Floer Homology*. Preliminary report.

Recently, Sarkar showed that a smooth marked cobordism between two knots  $K_1, K_2$  induces a map between the knot Floer homology groups of the two knots  $\text{HFK}(K_1), \text{HFK}(K_2)$ . It has been conjectured that this map is well defined (with respect to smooth marked cobordisms). After outlining what needs to be shown to prove this conjecture, I will present my current progress towards showing this result for the combinatorial version of HFK. Specifically, I will present a generalization of Carter and Saito's movie move theorem to grid diagrams, give a very brief introduction to combinatorial knot Floer homology and then present a couple of the required chain homotopies needed for the proof of the conjecture. (Received January 15, 2012)