

B I - C O M A T H E M A T I C S C O L L O Q U I U M

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“Combinatorial Floer Homology”

Monday, April 23, 2007

Talk at 4:15 – Park 328
Tea at 3:45 – Park 355, Math Lounge

Abstract:

Heegaard Floer theory (developed by Ozsvath and Szabo) is a tool in low-dimensional topology which can be used to address questions about knots, three-manifolds, and four-manifolds; in particular, it can be used to tell when a knot in the three-sphere is nontrivial. The original definition of Heegaard Floer homology involved counting solutions to some nonlinear differential equations. I will present an alternate, purely combinatorial description of Heegaard Floer homology for knots and links in the three-sphere. (This is joint work with Ozsvath and Sarkar.)

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