

BI-CO MATHEMATICS COLLOQUIUM

Peter Horn

“Generalizing the Genus of a Knot”

Monday, April 26, 2010

Talk at 4:15 – KINSC H109

Tea at 4:00 – KINSC Math Lounge, H208

Abstract: Every knot in 3-dimensional space lies on the boundary of a surface. The genus of a knot is the minimum genus of all such surfaces. By examining gropes (towers of surfaces) and the knots that bound them, we can generalize the definition of genus in several interesting ways. We will discuss the relationship between these genus invariants and knot Floer homology, and we will use these new invariants to filter the knot concordance group.

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