

B I-CO MATHEMATICS COLLOQUIUM

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“Knot Width is Additive”

Monday, September 13, 2010

Talk at 4:15 p.m. – KINSC H109
Tea at 4:00 p.m. – KINSC H208, Math Lounge

Abstract:

To form a mathematical knot, tie a knot in a piece of string and glue the ends together. The result is a knotted circle in 3-dimensional space. It is often useful to analyze knots by counting their minima and maxima with respect to the standard height function on 3-space. Width is an invariant of knots that counts the number of minima and maxima as well as their relative positions. It has been conjectured that width is additive with respect to connected sum, a way of splicing two knots into one. I will outline classic results pertaining to the conjecture and discuss joint work with Maggy Tomova that shows width is not additive.

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