

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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*“On the Classification of Legendrian
Rational Tangles”*

Monday, September 26, 2011

Talk at 4:15 – KINSC E309
Tea at 3:00 – Math Lounge, KINSC H208

Abstract:

Under certain considerations the flyping operations on rational tangles, which produce topologically isotopic tangles, may also produce tangles which are not Legendrian isotopic when viewed in the standard contact structure on Euclidean 3-space. We will describe a new approach to examining this statement, and survey results obtained in attempts to resolve a number of questions originally posed by Traynor. These results rely on a new type of diagram for rational tangles which provides a combinatorial framework for describing the characteristic foliations of associated compressing discs. We will look at precisely how these foliations can be used as a distinguishing invariant of Legendrian tangles. We will also discuss the limitations of our approach, considering briefly some questions that still require further investigation before we can obtain a complete classification.

H A V E R F O R D C O L L E G E