

Knot Theory: the Jones polynomial

Mentee: Elyas Bianchi

Mentor: Jesse Cohen

Abstract: To a non-mathematician, when you hear the word knot you might think of the knot you use to tie your shoes. However, to a topologist this is just a piece of string because you can always untie it and end up with the string. A mathematician's definition of a knot is a closed loop that may wrap around itself in some way. A central problem in the study of mathematical knots is the question; how do we tell two knots apart? A powerful technique that is used to study this question is called invariants. We will discuss a particular invariant, the Jones polynomial, in elementary terms.

References

[Ada94] Colin C Adams. *The Knot Book*. American Mathematical Soc., 1994.