

1131-57-288

Louis H Kauffman* (kauffman@uic.edu), 5530 South Shore Drive, Apt 7C, Chicago, IL 60637-1946. *Knotoids and Virtual Knot Theory*. Preliminary report.

This talk is joint work with Neslihan Gugumcu. A knotoid is a knot diagram with two ends. The ends can be in separate regions of the diagram. Equivalence is defined by Reidemeister moves that do not involve the ends of the diagram. We discuss the use of virtual knot theory to study knotoids. In particular, we define directly two invariants, the arrow polynomial and the affine index polynomial for knotoids and we use these invariants to obtain lower bounds on the complexity of knotoids. Here complexity denotes the height of a knotoid, a measure of the distance between the knotoid ends. We discuss our conjecture that the Jones polynomial (extended to knotoids) detects the unknotted knotoid. (Received July 17, 2017)