

1135-57-1625

Karene Chu* (chukare@mit.edu). *Long flat virtual knots and its associated graded space*. Preliminary report.

Virtual knot theory, introduced by Kauffman, is a generalization of classical knot theory of interest because its finite-type invariant theory is potentially a topological interpretation of Etingof and Kazhdan's theory of quantization of Lie bi-algebras. Classical knots inject into virtual knots, and flat virtual knots is the quotient of virtual knots which equates the real positive and negative crossings, and in this sense is complementary to classical knot theory within virtual knot theory. We completely classify flat virtual tangles with no closed components (pure tangles). This classification can be used as an invariant on virtual pure tangles and virtual braids. We also describe the target space of any universal finite type invariant on long flat virtual knots. (Received September 23, 2017)