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Karene CHU* (karene@math.utoronto.ca), Department of Mathematics, 6290, Bahen Information Center, 40, St George Street, Toronto, Ontario M5S 2E4, Canada. *Classification of Flat Virtual Pure Tangles and Bases for their Infinitesimal Algebras.*

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 classify flat virtual tangles with no closed components and give bases for its "infinitesimal" algebras. The classification of the former can be used as an invariant on virtual tangles with no closed components and virtual braids. We will also show that the infinitesimal algebras are the target spaces of any universal finite-type invariants on the respective variants of the flat virtual tangles, and that they include the space $\mathfrak{U}^{\text{univ}}$ defined by B. Enriquez. (Received September 25, 2012)