

The Volume Bound for Nested Torus Links

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A knot is an embedding of the circle in three-dimensional Euclidean space. The classification of knots is aided by the use of invariants, such as the Jones and the Alexander Polynomials. Following Thurston, a knot is called hyperbolic if the points not on it have the structure of a hyperbolic geometry. In this talk, we will look at a class of hyperbolic knots called twisted torus knots. Using combinatorial methods, we improve on the volume bound of Champanerkar et al 2012 for the associated nested torus links. Our method replaces the ideal Tetrahedra considered by Champanerkar et al. by ideal Octahedra. This research was conducted with Dr. Rolland Trapp and funded both by NSF grant DMS-1461286 and California State University San Bernardino.

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