1142-51-57   **Kathleen Hake*** (`khake@carleton.edu`). *Knotting Probability of Equilateral Hexagons.* Preliminary report.

For a positive integer $n > 3$, the collection of n-sided polygons embedded in 3-space defines the space of geometric knots. In this talk, we will consider the subspace of equilateral knots, consisting of embedded n-sided polygons with unit length edges. Paths in this space determine isotopies of polygons, so path-components correspond to equilateral knot types. When n is less than 6, the space of equilateral knots is connected. Therefore, we examine the space of equilateral hexagons. Using techniques from symplectic geometry, we can parametrize the space of equilateral hexagons with a set of measure preserving action-angle coordinates. With this coordinate system, we provide new bounds on the knotting probability of equilateral hexagons. (Received August 25, 2018)