1125-55-532   **Kathryn Bryant*** (`kthrynbrynt@gmail.com`), 14 E Cache la Poudre St, Colorado Springs, CO
80903. *Converting d-invariants into lattice points: A visualization technique to aid in knot slicing.*
This talk will focus on a particular technique used to prove/disprove knot sliceness and it will serve as an invitation to other researchers to help push the technique further. In the 2011 paper "The slice-ribbon conjecture for 3-stranded pretzel knots," Greene and Jabuka make use of Donaldson's diagonalization theorem and a theorem about d-invariants (due to Ozsváth and Szabó) from Heegaard-Floer theory in order to classify the slice knots within the family of 3-stranded pretzel knots. They give the necessary condition for a slice knot K that the number of vanishing d-invariants $d(Y, \mathfrak{s})$, where Y is the 2-fold branched cover of K and $\mathfrak{s}$ is a spin^c structure on Y, must exceed or equal $\sqrt{|\det K|}$, where $\det K$ is the knot determinant of K. The speaker used this criterion to study sliceness of 5-stranded pretzel knots and, after making a necessary refinement, translated the d-invariant criterion into one about lattice points. The goal of this talk is to explain this lattice point criterion and look for new ways to study it. (Received September 06, 2016)