The Effect of the Number of Crossing on Prime Knots on the Complexity of Their Stereographic and Inverse Stereographic Projections

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The purpose of this projection was to determine whether the complexity of the stereographic or inverse stereographic projections of prime knots increased as their number of crossings increased. This is important as current methods of proving knot equivalency increase in complexity as the number of crossings increase. This research found that the complexity of the projections, as measured by the spread of the derivatives, did not increase as crossing number increased. This supports future research into using either the stereographic or inverse stereographic projections to prove knot equivalency.

Awards Won: