

1154-57-175

Marion Campisi* (marion.campisi@sjsu.edu), **Ryan Blair**, **Maggy Tomova** and **Scott Taylor**. *Distortion and the bridge distance of knots.*

The distortion of an embedding of a knot is the supremum of the ratio of the distance between a pair of points along the knot and the distance between the points in \mathbb{R}^3 . The distortion of a knot type is the infimum of the distortion over all embeddings. We extend techniques due to Pardon to show that there is a lower bound on the distortion of a knot in \mathbb{R}^3 proportional to the minimum of the bridge distance and the bridge number of the knot. We also exhibit an infinite family of knots for which the minimum of the bridge distance and the bridge number is unbounded and Pardon's lower bound is constant. (Received August 19, 2019)