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Olivia Del Guercio* (delgur@gmail.com), 1 Chapin Way, Northampton, MA 01063, and **Elise Catania, Jack Kendrick, Hana Sambora** and **Sarangoo Chimgee**. *An Invariant of p -colorable Knots*. Preliminary report.

In this work we compute a knot invariant known as the dihedral linking number for all 3-colorable knots up to 12 crossings. Generally, a linking number is used to describe how many times two distinct knots wind around each other. When a knot has a valid 3-coloring, it lifts to two knots in a separate three-dimensional space known as a branched cover. The dihedral linking number is the linking number of these two knots. This number could potentially allow for the differentiation of mutant knots. We are also looking into the dihedral linking numbers produced by coloring knots with any prime number of colors, which will allow for analysis of a greater number of knots. (Received September 17, 2019)