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Vincent F Longo* (longov1@tcnj.edu), 357 Harford Rd, Somerdale, NJ 08083. *Knot Invariants from Spanning Surfaces for a Two-Bridge Knot.*

The Alexander polynomial of a knot is one of the most well known and useful knot invariants in the field of Knot Theory. One way of finding the Alexander polynomial of a knot is by constructing a matrix using the unique orientable surface bounded by the knot, and taking the determinant of that matrix. We present an extension of this notion for non-orientable surfaces bounded by a knot by defining the State polynomials of a two-bridge knot. We then present some of the properties shared by the State polynomial and Alexander polynomial, along with some notable differences between the two.

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