

1081-55-7

Micah W. Chrisman* (mchrisma@monmouth.edu). *On the Combinatorics of Smoothing.*

Many virtual knot invariants have their values determined by a choice of smoothing on a subset of the classical crossings. From the smoothing, one typically needs to count the number of connected components obtained. We present an efficient method to count the the number of these connected components. The method is based upon an application of spectral graph theory to a modification of a theorem of Zulli. We apply this method to counting one component subdiagrams of the family of pretzel knots. Two different classes of smoothings are considered. (Received September 14, 2011)