

1025-05-115

Michael John Khoury* (khoury@math.osu.edu), 1642 Red Robin Rd, Columbus, OH 43229,
and **Alfred Rossi**. *Polyak-Viro formulas for the coefficients of the Conway polynomial.*

Polyak-Viro formulas, also known as arrow diagram formulas, give a combinatorial approach to the study of knot invariants through Gauss diagrams. However, there are surprisingly few concrete examples of invariants with known Polyak-Viro formulas, even among the most well-known invariants. In this talk, we will give a single combinatorial construction which will enable us to describe the explicit Polyak-Viro formula for each coefficient of the Conway polynomial for links of any number of components. As a byproduct, we will obtain an alternative non-recursive description of the Conway polynomial in the case of knots and 2-links.

The relevant definitions and notations surrounding Polyak-Viro formulas will be reviewed. (Received January 18, 2007)