

1108-57-543

Hans U. Boden* (boden@mcmaster.ca), 1280 Main St W, Hamilton, Ontario L9H-4C3, Canada, **Emily Dies**, University of Toronto, and **Anne Isabel Gaudreau** and **Adam Gerlings**, University of Calgary, and **Andrew J Nicas**, McMaster University. *A classical approach to virtual knots.*

Given a virtual knot K , there are various groups naturally associated to K . We will discuss the invariants obtained from the elementary ideal theory of the virtual knot group VG_K . For instance, associated to the $k=0$ ideal is a polynomial $H_K(s, t, q)$ in three variables, and we show how the q -width of $H_K(s, t, q)$ gives information about the virtual crossing number of K . The polynomial $H_K(s, t, q)$ satisfies a skein formula, and one can define a twisted polynomial invariant of virtual knots for any representation from VG_K to $GL_n(R)$. Time permitting, we will also discuss recent work on almost classical knots, which are virtual knots with a diagram that admits an Alexander numbering. (Received January 20, 2015)