

ARC ALGEBRAS AND EXOTIC SPRINGER FIBERS

ARIK WILBERT

Abstract: We will explain how to construct exotic versions of Khovanov's arc algebra. The term "exotic" refers to the fact that these algebras naturally arise as geometrically defined convolution algebras built from exotic Springer fibers. These algebraic varieties play a prominent role in Kato's Deligne-Langlands type classification of simple modules for multiparameter Hecke algebras of type C. The multiplication of the exotic arc algebra can be described explicitly using the diagrammatics of the two-boundary Temperley-Lieb algebra. If time permits we will explore the representation theory of this algebra and explain possible connections to categorical invariants of knots and links.