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Christopher R Cornwell* (cornwell@math.duke.edu). *Augmentations and knot contact homology.*

Knot contact homology is an invariant of knots, found as the homology of a differential graded algebra (DGA) that counts holomorphic curves in the cotangent bundle of \mathbb{R}^3 with Lagrangian boundary on the conormal bundle to the knot. The augmentation polynomial, whose zero locus determines the image of the base ring under augmentations of the DGA, while weaker than the DGA, appears to contain a wealth of information. For example, the augmentation polynomial detects the unknot and has (a specialization with) the A-polynomial as a factor. It is also conjectured to determine the colored HOMFLY polynomials. We will discuss a view of augmentations through representation theory of the knot group, applying this to the augmentation polynomial of torus knots. (Received August 27, 2012)