1094-57-127 **Christopher R Cornwell*** (cornwell@math.duke.edu). *Knot contact homology and representations of the knot group.*

From knot contact homology a three-variable polynomial, called the augmentation polynomial, can be defined. There is a conjectured relationship, similar to the AJ conjecture relating the A-polynomial to colored Jones polynomials, between the augmentation polynomial and the colored HOMFLY-PT polynomials (colored by the symmetric representation).

A specialization of the algebra used in knot contact homology yields a two-variable augmentation polynomial, which is known to have the A-polynomial as a factor. We describe a correspondence between augmentations in this specialization and certain representations of the knot group (KCH representations). The correspondence shows that the two-variable augmentation polynomial may be viewed as a generalized A-polynomial, in that it records the restriction of KCH representations to the peripheral subgroup and 2-dimensional KCH representations give precisely the A-polynomial factor.

As a bonus, the dimension of irreducible KCH representations provides a new method for studying the meridional rank of the knot group and its relationship to the bridge number. (Received August 17, 2013)