1146-57-435 **R Sebastian Haney** and **Thomas E Mark*** (`tmark@virginia.edu`), 141 Cabell Dr., Kerchof Hall, PO Box 400137, Charlottesville, VA 22904. *Cylindrical contact homology of Brieskorn homology 3-spheres.*

Contact homology is an invariant for contact manifolds originating in the ideas of Eliashberg, Givental and Hofer on symplectic field theory. Loosely, it is the homology of a chain complex whose generators are closed orbits of the Reeb vector field associated to a contact form, and whose differential counts pseudo-holomorphic curves in the symplectization. The definition in full generality is still a work in progress by many mathematicians, but if one restricts to contact 3-manifolds satisfying some additional hypotheses then work of Hutchings and Nelson shows that a version of the theory can be defined whose differential counts only curves of genus 0: hence, "cylindrical" contact homology. I will describe some joint work with Sebastian Haney that calculates the cylindrical contact homology of a certain universally tight contact structure on a Brieskorn homology sphere $\Sigma(p,q,r)$ of "general type," meaning that $\frac{1}{p} + \frac{1}{q} + \frac{1}{r} < 1$. (Received January 28, 2019)