1084-57-83 **Arunima Ray*** (`arunima.ray@rice.edu`). *Slice knots which bound Klein bottles.*
We investigate the properties of knots in $\mathbb{S}^3$ which bound Klein bottles, such that a pushoff of the knot has zero linking number with the knot, i.e. has *zero framing*. This is motivated by the many results in the literature regarding slice knots of genus one, for example, the existence of homologically essential zero self-linking simple closed curves on genus one Seifert surfaces for algebraically slice knots. Given a knot K bounding a (punctured) Klein bottle F with zero framing, we show that J, the core of the orientation-preserving band in any disk-band form of F, has zero self-linking. We prove that such a K is slice in a $\mathbb{Z}\left[\frac{1}{2}\right]$-homology $\mathbb{B}^4$ if and only if J is as well, a stronger result than what is currently known for genus one slice knots. As an application, we prove that given knots K and J and any odd integer p, the $(2,p)$ cables of K and J are $\mathbb{Z}\left[\frac{1}{2}\right]$-concordant if and only if K and J are $\mathbb{Z}\left[\frac{1}{2}\right]$-concordant. In particular, if the $(2,1)$-cable of a knot K is slice, K is slice in a $\mathbb{Z}\left[\frac{1}{2}\right]$-homology ball. (Received August 23, 2012)