1142-57-63          **Yu Pan** and **Dan Rutherford\*** (`rutherford@bsu.edu`). *Augmentations and immersed Lagrangian fillings.*

This is joint work with Y. Pan that applies previous joint work with M. Sullivan. Let $\Lambda \subset \mathbb{R}^3$ be a Legendrian knot with respect to the standard contact structure. The Legendrian contact homology (LCH) DG-algebra, $\mathcal{A}(\Lambda)$, of $\Lambda$ is functorial for exact Lagrangian cobordisms in the symplectization of $\mathbb{R}^3$, i.e. a cobordism $L \subset Symp(\mathbb{R}^3)$ from $\Lambda_-$ to $\Lambda_+$ induces a DG-algebra map, $f_L : \mathcal{A}(\Lambda_+) \to \mathcal{A}(\Lambda_-)$. In particular, if $L$ is an exact Lagrangian filling, i.e. if $\Lambda_- = \emptyset$, the induced map is an augmentation $\epsilon_L : \mathcal{A}(\Lambda_+) \to \mathbb{Z}/2$.

In this talk, I will discuss an extension of this construction to the case of immersed, exact Lagrangian cobordisms based on considering the Legendrian lift $\Sigma$ of $L$. When $L$ is an immersed, exact Lagrangian filling a choice of augmentation $\alpha$ for $\Sigma$ produces an induced augmentation $\epsilon_{L,\alpha}$ for $\Lambda_+$. Using the cellular formulation of LCH, we are able to show that any augmentation of $\Lambda$ may be induced by such a filling. (Received August 27, 2018)

1