1073-57-75   **Lenhard Ng*** (`ng@math.duke.edu`), Mathematics Department, Duke University, Durham, NC 27708. *Transverse knots and naturality in knot Floer homology.* Preliminary report.

Transverse knots in $\mathbb{R}^3$ are knots that are transverse to the standard contact structure given by $\ker(dz - y\, dx)$. I will survey what is known about classifying transverse knots. In particular, I'll describe some new preliminary work with Dylan Thurston, in which we use naturality for knot Floer homology to strengthen the grid invariant of transverse knots. This allows us to distinguish certain transverse examples of Birman and Menasco, and has consequences for the transverse mapping class group. (Received July 27, 2011)