1079-14-440 **Yusuf Mustopa*** (ymustopa@umich.edu), Department of Mathematics, East Hall, University of Michigan, Ann Arbor, MI 48103, and **Robert Lazarsfeld**. *Stability of Syzygy Bundles on Surfaces.* Preliminary report.

The syzygy bundle associated to a subvariety $X \subseteq \mathbb{P}^n$ governs the fine structure of the equations which cut out X in $\mathbb{P}^n$. A classical result of Ein-Lazarsfeld implies that this bundle is stable when X is a curve embedded in $\mathbb{P}^n$ embedded by a complete linear series of large degree. In this talk I will discuss work in progress which attempts to generalize this result to surfaces. (Received January 18, 2012)