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Lawrence Ein, Robert Lazarsfeld and **Yusuf Mustopa*** (mustopa@bc.edu). *Stability of Syzygy Bundles.*

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 smooth curve embedded in \mathbb{P}^n by a complete linear series of large degree. In this talk I will discuss joint work with Lawrence Ein and Rob Lazarsfeld which attempts to generalize this to varieties of higher dimension. (Received September 19, 2012)