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P Banagere and **Krishna Hanumanthu*** (khanuma@math.ku.edu), Department of Mathematics, University of Kansas, Lawrence, KS 66045. *Syzygies and geometry of projective varieties.*

The syzygies of a very ample line bundle L on a projective variety $X \subset \mathbb{P}(H^0(X, L))$ carry information about the geometry of the embedding. This interplay was first studied in depth by M. Green and R. Lazarsfeld. This led to the notion of N_p property for L , where p is a natural number. While this situation is fairly well understood for curves, there is no completely satisfactory answer in higher dimensions. This talk will deal with some new results in this direction for surfaces. (Received January 17, 2011)