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Ravindra Girivaru* (girivarur@ums1.edu), 354, ESH, Department of Math and CS, 1 University Boulevard, University of Missouri, St. Louis, MO 63105. *Extension theorems for cycles and bundles*. Preliminary report.

Let Y be a smooth, projective variety and X a smooth, ample hyperplane section in Y . Given a subvariety $Z \subset X$ (respectively a bundle E on X), under what conditions can one find a subvariety $Z' \subset Y$ (respectively a bundle E' on Y) such that $Z = Z' \cap X$ (respectively $E = E'|_X$).

When the subvariety is of codimension 1 (respectively the bundle has rank 1), these are answered by the Lefschetz theorems. I will talk about generalisations of these theorems. (Received February 09, 2012)