1062-14-182   **Thomas S Bleier*** (`tsbleier@syr.edu`), 215 Carnegie, Syracuse University, Syracuse, NY 13244-1150. *The Hyperelliptic Locus in $\overline{\mathfrak{M}}_3$.*

Using a map of vector bundles, combined with the Thom-Porteous formula, Harris and Morrison are able to compute the class of the locus of hyperelliptic curves in $\mathrm{Pic}_{fun}(\mathfrak{M}_3)$. In this talk, we will look at how to extend this idea, using a technique due to Diaz for computing the class of the degeneracy locus of a map of coherent sheaves, combined with an Excess Porteous formula, in order to compute the class of the closure of the hyperelliptic locus in $\mathrm{Pic}_{fun}\overline{\mathfrak{M}}_3$. (Received August 07, 2010)