1018-13-224 **Harm Derksen*** (hderksen@umich.edu). *Hilbert Functions of Subspace Arrangements.*

Many topological invariants of real and complex subspace arrangements are known to be combinatorial: these invariants are entirely determined by the dimensions of intersections of subspaces in the arrangement. The Hilbert series of the vanishing ideal of a subspace arrangement is not a combinatorial invariant. However, the Hilbert series of the product of the vanishing ideals of each of the subspaces turns out to be a combinatorial invariant. (Received March 07, 2006)