1139-05-533 Christin Bibby* (bibby@umich.edu). Supersolvable posets. Preliminary report.

The structure of a supersolvable lattice has proven to be fruitful in the theory of hyperplane arrangements, where it arises as the intersection poset of a fiber-type arrangement. A nice partition of the atoms in the poset determines the roots of the characteristic polynomial, thus giving a factorization of the Poincaré polynomial of the arrangement complement. The Orlik-Solomon algebra is a Koszul algebra, which allows one to extract information about the rational homotopy theory of the complement. We explore these ideas for toric and elliptic arrangements, where the analogue of the intersection poset is not even a semilattice but a notion of supersolvability can still be applied. Based on joint work with Emanuele Delucchi. (Received February 19, 2018)