1145-13-1594   **Benjamin J Drabkin*** (`benjamin.drabkin@huskers.unl.edu`), 1535 F Street, Apt 10, Lincoln, NE 68508. *The containment problem for symbolic powers and hyperplane arrangements.*

Given an ideal I in a commutative Noetherian ring R, the m-th symbolic power of I is defined to be $I^{(m)} = \bigcap_{p \in \mathrm{Ass}(I)} I_p^m \cap R$. It is well known, due to the works of Ein-Lazarsfelt-Smith, Hochster-Huneke, and Ma-Schwede, that every ideal I of codimension e in a regular ring satisfies the containment $I^{(er)} \subseteq I^r$ for all $r \geq 1$. In many cases, this containment can be improved upon, however, in recent years a number of ideals have been found for which the containment is tight.

Ideals exhibiting tight containments have been the object of a great deal of study over the last few years, and there has been a concerted effort to find new containment-tight ideals. All known ideals exhibiting tight containments arise from certain hyperplane arrangements. This talk will demonstrate a technique by which containment-tight ideals arising from the singular locus of a hyperplane arrangement can be used to find containment-tight ideals in higher-dimensional hyperplane arrangements. This has applications to providing novel examples of containment-tight ideals. (Received September 23, 2018)

1