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**Benjamin J Drabkin\*** (benjamin.drabkin@huskers.unl.edu) and **Alexandra Seceleanu** (aseceleanu@unl.edu). *Containment-Tight Ideals from Singular Loci of Reflection Arrangements.*

Given an ideal  $I$  in a commutative Noetherian ring  $R$ , the  $m$ -th symbolic power of  $I$  is defined to be  $I^{(m)} = \bigcap_{p \in \text{Ass}(I)} (I_p^m \cap R)$ . By results of Ein-Lazarsfeld-Smith, Hochster-Huneke, and Ma-Schewede every ideal  $I$  of codimension  $e$  in a regular ring satisfies the containment  $I^{(e)} \subseteq I^e$ . In many cases, this containment can be improved upon; however, in recent years a number of ideals have been found for which this containment is tight.

All known ideals exhibiting tight containments are codimension 2 and satisfy  $I^{(3)} \not\subseteq I^2$ . Furthermore these ideals define the singular loci of the hyperplane arrangements for some complex reflection groups. This talk will aim to classify which complex reflection groups give rise to hyperplane arrangements whose singular loci exhibit the noncontainment  $I^{(3)} \not\subseteq I^2$ . (Received September 18, 2019)