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Hyperplane Arrangements and Extremal Behavior

Many interesting hyperplane arrangements have been studied recently by commutative algebraists, as they have been shown to be related to objects with interesting properties. Particularly, ideals failing the containment  $I^{(3)} \subseteq I^2$ , and sets of points whose ideal has larger than expected intersection with a power of a generic point ideal. We discuss some of these examples, and some results showing how certain properties of the Hyperplane Arrangements may play a role in the above phenomenon.