

Do squarefree monomial ideals satisfy the persistence property?

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We say that an ideal J satisfies the persistence property if the set of associated prime ideals of the s -th power J^s is a subset of the associated prime ideals of the $(s+1)$ -th power of J for all integers s .

While there are examples of monomial ideals that fail to have this property, there are no known examples that are squarefree, thus suggesting that all squarefree monomial ideals satisfy the persistence property. I will survey some families of squarefree monomial ideals, and introduce some new ones, that are known to satisfy the persistence property. I will also describe a conjecture about coloring graphs, that if true for all hypergraphs, would imply that all squarefree monomial ideals satisfy the persistence property.