INSALATE DI MATEMATICA

Cohomology rings of hyperplane and toric arrangement complements

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IN THIS TALK

A complex hyperplane arrangement is a finite set of codimension one vector subspaces of a complex vector space. Many interesting topological spaces can be realized as the complement space of such an arrangement, for instance the space of configurations of n distinct points on the plane. These complement spaces have been the subject of intense studies in the last decades from a variety of points of view: topological, algebraic and combinatorial. Several results and techniques in this framework can be adapted to more general settings, for example in the case of toric arrangements, where the "ambient" complex vector space is replaced by a complex torus and the hyperplanes are replaced by kernel of monomial characters.
In this talk we will discuss some algebraic aspects regarding the cohomology rings of the complement spaces of hyperplane and toric arrangements, in particular we will be focusing on the question of whether these (graded) rings are generated by elements of degree one.

🔑words: hyperplane and toric arrangements, cohomology rings

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"Obvious" is the most dangerous word in mathematics.
(Eric Temple Bell)

U9 - 09 📍
4:45 pm (CET)

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