Algebra/Topology Seminar

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Invariants in the Cohomology of the Complement of a Reflection Arrangement

Thursday, October 20, 2022
3:00 p.m. in ES-143

Abstract. Let G be a finite group of linear transformations of a finite dimensional complex vector space V generated by reflections and let M be the subset of V consisting of vectors that are not fixed by any of the reflections in G. Then G acts on M, hence on the singular cohomology of M, and one can ask about the character of this graded representation. In this talk I will report on joint work with Goetz Pfeiffer and Gerhard Roehrle in which we explicitly compute the space of G-invariants. A surprising, and unexplained, consequence of the calculations is that the Poincaré polynomial of the space of invariants fits one of just four simple patterns.