

Configuration spaces and combinatorial algebras

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Abstract

In this talk, I will discuss connections between configuration spaces, an important class of topological space, and combinatorial algebras arising from the theory of reflection groups. In particular, I will present work relating the cohomology rings of some classical configuration spaces - such as the space of n ordered points in Euclidean space - with Solomon descent algebra and the peak algebra. The talk will be centered around two questions. First, how are these objects related? Second, how can studying one inform the other? This is joint, on-going work with Marcelo Aguiar and Vic Reiner.