

Abstract: Toric deformations and combinatorial representation theory  
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An important question in invariant theory is to describe the ring of invariant polynomials under a group action. In many interesting cases, this is a challenging problem since those invariant rings have quite complicated structures.

Recently, a geometric tool called toric deformation has been successfully applied to this problem in connection with representation theory of the classical groups.

In this talk I will give an overview of some basic questions in combinatorial representation theory and then explain several cases where these deformation ideas fit nicely.