

Speaker: I. Gahramanov

Title: The Bailey construction and 3d mirror symmetry

Abstract:

In this talk, we discuss the relationship between the integral Bailey lemma and mirror symmetry in three-dimensional supersymmetric gauge theories. Three-dimensional mirror symmetry relates the superconformal infrared fixed points of a certain class of quiver gauge theories. The simplest example of such a duality is the equivalence between 3d $N=2$ supersymmetric quantum electrodynamics and a theory of three chiral multiplets X, Y, Z with a superpotential $W=XYZ$. These dualities can be tested by computing supersymmetric partition functions. In some cases, starting from a partition function identity associated with a specific mirror duality, one can construct a family of dualities using the integral analog of the Bailey chain.