

abstract

MATHEMATICAL PHYSICS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

This will be an overview of the paper [hep-th/0306238](#) written jointly with N. Nekrasov. Our main idea is the interpretation of the low-energy effective prepotential of the $N=2$ supersymmetric gauge theory as the free energy of a certain natural ensemble of random partitions in the thermodynamic limit. The thermodynamic limit of the free energy is controlled by the emerging limit shape of a random partition ("saddle point"). This limit shape can be determined explicitly and is found to be identical to the Seiberg-Witten curve. This proves the conjecture proposed by Nekrasov in [hep-th/0206161](#) and provides a natural interpretation of all ingredients in the Seiberg-Witten prepotential.