Seminar on mirror symmetry and representation theory

Tuesday, April 4, 5:00-6:30, MIT, Room 2-132.

Around instanton counting

by Alexander Braverman (Brown).

Abstract. I will explain the definition of the so called Nekrasov partition function attached to a semi-simple group G and give several (partially conjectural) interpretations of it: the first (more or less understood) is through periods of some family of algebraic curves; the second (conjectural in most cases) is through Gromov-Witten invariants of a certain 3-dimensional Calabi-Yau manifold (the underlying "physics" is the so called "geometric engineering" of Katz, Klemm, Vafa and others). If time permits I will also mention the relation to the so called Donaldson-Thomas invariants.

Seminar contacts: Denis Auroux (auroux@math.mit.edu)
Roman Bezrukavnikov (bezrukav@math.mit.edu)
Rina Anno (rina@math.harvard.edu)