BOSTON UNIVERSITY SPECIAL GEOMETRY SEMINAR

MIRROR CONSTRUCTION BY DEFORMATIONS OF LAGRANGIANS

Hansol Hong
Harvard University/CMSA

January 17, 2018, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:30pm in Room 144

Abstract: Mirror symmetry is a miraculous duality between symplectic geometry of a Kahler manifold and complex geometry of its mirror dual manifold (and vice versa). In this talk, we will explore the construction of a mirror manifold using formal deformation of a fixed Lagrangian submanifold inside a symplectic manifold, which is essentially the study of holomorphic disks bounded by the Lagrangian. We will see that such a construction reveals an interesting link with other fields of mathematics such as noncommuative geometry and number theory. Moreover, it naturally induces a functor between categories built upon symplectic and complex informations of the mirror pair which are main players in Kontsevich's homological mirror symmetry conjecture. I will also describe how to glue formal deformation spaces from different Lagrangians.

Contact: Takashi Kimura (*kimura@math.bu.edu*) for more information.