

BOSTON UNIVERSITY GEOMETRY SEMINAR

Gromov-Witten theory with descendants in genus zero via Mirror Principle

Luke Cherveny
(Brandeis)

Wednesday Oct. 5, 4-5 pm in MCS B21.
Tea 3:45-4 in MCS 144.

Abstract: The mirror principle program, introduced by Lian-Liu-Yau, seeks to identify certain sequences of multiplicative characteristic classes on Kontsevich's moduli of stable maps by exhibiting them as sequences of hypergeometric-type classes on a simpler linear moduli. In the case of the Euler class of obstruction bundles induced by a concave bundle on P^n , this encodes interesting enumerative information concerning counts of rational curves of given genus and degree (Gromov-Witten invariants). We will survey the original mirror principle and discuss a “pointed” modification in genus zero that allows the program to be implemented for data twisted by pullbacks of classes from P^n . This encodes counts of marked rational curves in which the markings map to prescribed subspaces, i.e. Gromov-Witten invariants with descendants