

Northeastern University



Mathematics Department

Geometry, Physics, and Representation Theory Seminar

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Thursday, February 15, 2:50-3:50 pm, Lake Hall 509

Elliptic fibrations in the presence of singularities

Abstract

I will present recent progress on genus 0 curve counting for elliptic fibrations. The Gromov-Witten generating series for an elliptic fibration is expected to have modular properties by mirror symmetry. When the homology class in the base is irreducible and the total space is smooth, we obtain a classical modular form for the full modular group. If the base class is reducible, we expect the series to be quasi-modular. If the fibration does not admit a section, then the modular form has higher level. Both of these relaxations are related to the presence of singularities in the geometry.