

Queen's Algebraic Geometry — Seminar —

MIRROR SYMMETRY FOR THE ELLIPTIC CURVE VIA TROPICAL GEOMETRY

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Abstract

Mirror symmetry for the elliptic curve identifies on one side, certain generating functions of Hurwitz numbers, to Feynman integrals on the other side. This first half, the A-model, is a classical theory and is well understood in terms of the representation theory of the symmetric group, while the B-model has remained more mysterious. Until recently, the only proofs of this connection have been physics 'proofs'. Recently though, the work of Costello-Li and of Boehm-Bringmann-Buchholz-Markwig have provided two independent proofs of this identity. In this talk I will discuss these two proofs, focusing primarily on the latter which uses tropical geometry in a novel way to get around the combinatorics of Feynman graphs.

Monday 28 October 2013
16:30 – 17:30
319 Jeffery Hall