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Mathematics Colloquium

Counting open curves via Berkovich geometry

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Abstract

Motivated by mirror symmetry, we study the counting of open curves in log Calabi-Yau surfaces. Although we start with a complex surface, the counting is achieved by applying methods from Berkovich geometry (non-archimedean analytic geometry). This gives rise to new geometric invariants inaccessible by classical methods. These invariants satisfy a list of very nice properties and can be computed explicitly. If time permits, I will mention the conjectural wall-crossing formula, relations with the works of Gross-Hacking-Keel and applications towards mirror symmetry.

Wednesday, 29 March 2017, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.