

# Queen's Algebraic Geometry — Seminar —

## ORBIFOLD GROMOV-WITTEN THEORY AND ENUMERATION OF PLANE CURVES

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### Abstract

Using Gromov-Witten theory and quantum cohomology of the projective plane, Kontsevich obtained a beautiful formula for the number of rational plane curves of degree  $d$  passing through  $3d - 1$  general points. We give an approach to further problems in enumerative geometry using Gromov-Witten theory of stacks. In particular, we compute the number of rational plane curves with prescribed tangencies to a smooth cubic. We show that certain of these invariants are enumerative, and obtain a formula for these numbers. This is joint work with Chuck Cadman.

Monday, March 3, 2008  
4:30pm – 5:30pm  
319 Jeffery Hall