

Counting curves on surfaces

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Counting nodal curves on surfaces

Abstract:

I will discuss how the Euler characteristics of relative Hilbert schemes of points on families of curves encode, in good situations, the number of maximally nodal curves in the family. Kool, Thomas, and I showed that one good situation was an up to d dimensional slice of a d -very-ample linear system; this led to a proof of Goettsche's conjecture regarding the universality of the nodal curve counting invariants in the sufficiently ample setting. More recently, Kleiman and I showed that for rational surfaces, weaker conditions suffice, verifying a further conjecture of Goettsche.