

COUNTING CURVES ON SINGULAR SURFACES

Ragni Piene, University of Oslo

Let S be a smooth projective surface and \mathcal{L} a line bundle. As is now well known, the number of r -nodal curves in the linear system $|\mathcal{L}|$ passing through the appropriate number of points on S can be expressed as a polynomial of degree r in the Chern numbers \mathcal{L}^2 , $K_S \cdot \mathcal{L}$, K_S^2 , and $c_2(S)$. There has recently been work by several authors (Ardila–Block, Liu–Osserman, Block–Göttsche) that attempt to find similar formulas in the case that S is a singular toric surface. I will discuss this work, and also initial recent work by Nødland in the case of weighted projective planes.