

1049-14-177

Dimitri Zvonkine* (`dimitri.zvonkine@gmail.com`). *Completed cycles and singularities of stable maps.*

For every family of genus 0 stable maps to $\mathbb{C}P^1$ we can consider the locus of points where the map presents some given kind of singularity (chosen from the list of all possible singularities for genus 0 stable maps). We provide an effective method to compute the cohomology class Poincaré dual to this locus in terms of several “basic” classes. These expressions are universal, i.e., they do not depend on the family. They are called (generalized) Thom polynomials.

In the second part of the talk, insofar as time permits, we will present several conjectures concerning Thom polynomials for genus g stable maps. They are related to the representation theory of the symmetric group (more precisely, to the so-called completed cycles), to the Gromov-Witten invariants of curves and to a conjectural ELSV formula for the space of r -spin structures. (Received March 03, 2009)