Filtrations on local algebras and Thom polynomials

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SUMMARY

The theory of Thom polynomials describes cohomology classes Poincaré dual to the strata of singularity locus of generic differentiable mapping. Universal formulas for these classes experience a stabilization with respect to the change of dimension of manifolds participating in the mapping. The information about stabilized Thom polynomial is collected in the generating series that proved to be a rational function. It is interesting to observe that the generating function is not unique. In fact, it is determined by a choice of a filtration on the local algebra of the singularity. We will discuss to what extend a freedom in the choice of the filtration leads to a freedom in the choice of the generating function.

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