

ON THE DIFFERENCE BETWEEN MILNOR NUMBER AND TJURINA NUMBER OF ISOLATED SINGULARITIES

PATRICIO ALMIRON

Abstract In this talk we will talk about the upper bounds for the difference between Milnor number and Tjurina number of isolated singularities. Our main motivation for this topic is the following question posed by Dimca and Greuel in 2017: is the quotient of Milnor and Tjurina numbers less than $4/3$ for any plane curve singularity? We will present a complete solution to the Dimca and Greuel's question together with its natural extension to singularities in higher dimensions. This generalization will link this topic with an old standing conjecture about the geometric genus posed by Durfee in 1978.