A new analytic invariant for reduced plane curve singularities

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SUMMARY

We introduce a set of values associated to the module of Kähler differentials of a plane reduced curve singularity. In this case, this set is a new analytic invariant, that we denote by Λ. Such invariant is sharper than the Tjurina number τ in the sense that there exist two curve singularities with distinct Λ-invariants but with the same Tjurina number. Furthermore, we give an way to get τ from the data Λ, the intersection number of the branches and the Tjurina number of each branch. This set of values has properties very closed to those of the semigroup of values associated to a singularity with several branches studied by A. García [3], V. Bayer [1] and F. Delgado [2]. (Joint work with Escudeiro, M. and Hefez, A.)

Referencias

[1] Bayer, V., *Semigroup of two irreducible algebroid plane curves*, Manuscripta Math. 49 n0 . 3, 207-241 (1985).

[2] Delgado, F., *The semigroup of values of a curve singularity with several branches*, Manuscripta Math. 59, 347-374 (1987).

[3] García, A., *Semigroups associated to singular points of plane curves*, J. Reine. Angew. Math. 336, 165-184 (1982).

[4] Mather, J. N. and Yau, S.T., *Classification of isolated hypersurface singularities by their moduli algebras*, Invent. Math., 69: 243-251 (1982).

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