

Flat versal deformations of parametrized plane curves

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Flat singularity theory of plane curves is the study of singularities of curves taking account points of inflection. For a single curve, several definitions of equivalence relations are given, firstly by Dias and Nuño Ballesteros (2018) and then by Oset Sinha and Tari (2013) and Wall (2013). The question that we address here is the following: is there a theory of flat versal unfoldings of plane curves?

We showed in Salarinoghabi and Tari (2017) a possible way for studying deformations of plane curves taking into consideration singularities, inflections as well as vertices. The method follows a similar approach to that used for studying deformations of vector fields and of implicit differential equations. It is possible that our approach is the best that one can hope for in this situation as we are trying to capture too much information of different nature (inflections and singularities which are metric independent and vertices which depend on the metric).

In this talk, we give a definition of flat versal deformations of parametrized plane curves using their full dual curves.