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Finite cyclicity of hh-graphics with a triple nilpotent singularity of codimension 4

In 1994, Dumortier, Roussarie and Rousseau launched a program aiming at proving the finiteness part of Hilbert's 16th problem for the quadratic system. For the program, 121 graphics need to be proved to have finite cyclicity. In this presentation, I will report our effort to show that some hh-graphics through a triple nilpotent singularity of codimension 4 have finite cyclicity. This is an in progress joint work with professor Christiane Rousseau and professor Huaiping Zhu.