

GEOMETRY AND TOPOLOGY SEMINAR

On analytic equivalence of singularities of second order linear ODE's

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Abstract. There is a difference between 2nd order meromorphic linear ODEs on one hand, and 2by2 linear differential systems on the other, in what is the natural underlying space and the natural transformation group: 1-jet bundles and point transformations for ODEs, versus vector bundles and gauge transformations for systems. While the local analytic classification of singularities the latter is well established by the works of Birkhoff, Sibuya, Balser–Jurkat–Lutz and others, little seems to have been written on the problem of analytic classification of linear ODE's. In this talk I will describe the moduli space of local analytic classification under a generic condition, and provide some parallels with the local moduli space of linear systems.



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