

TITLE: Isomonodromy deformations at an irregular singularity with coalescing eigenvalues

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ABSTRACT: I present a joint work with G. Cotti and B.Dubrovin. We consider a linear system of ODEs with an irregular singularity at infinity of Poincare' rank equal to one, whose leading matrix coefficient has eigenvalues coalescing along a locus in the space of deformation parameters. The deformation is then non-admissible and infinity becomes a "resonant irregular singularity" . We give an extension of the deformation theory in this case, in view of applications.