NON-GENERIC ISOMONODROMY DEFORMATIONS

DAVIDE GUZZETTI - SISSA

Some of the main results of [1] (see also [3] for a synthetic exposition with examples), concerning non-generic isomonodromy deformations of a certain linear differential system with irregular singularity and coalescing eigenvalues, are discussed from the point of view of Pfaffian systems adopted in [5], making a distinction between weak and strong isomonodromic deformations. The results are motivated by the problem of extending to coalescent structures the analytic theory of Frobenius manifolds [2], [3], [6].

References

[1] G. Cotti, B. Dubrovin. D. Guzzetti: Isomonodromy Deformations at an Irregular Singularity with Coalescing Eigenvalues. arXiv:1706.04808 (2017).

[2] G. Cotti, B. Dubrovin. D. Guzzetti: Local Moduli of Semisimple Frobenius Coalescent Structures. arXiv:1712.08575 (2017).

[3] G. Cotti, D. Guzzetti: Analytic geometry of semisimple coalescent Frobenius structures. Random Matrices Theory Appl. 6 (2017), no. 4, 1740004, 36 pp.

[4] G. Cotti, D. Guzzetti: Results on the Extension of Isomonodromy Deformations to the case of a Resonant Irregular Singularity. Random Matrices Theory Appl. (2018) https://doi.org/10.1142/S2010326318400038.

[5] D. Guzzetti: Notes on non-generic Isomonodromy Deformations. arXiv:1804.05688 (2018)

[6] G. Cotti et al. Helix Structures in Quantum Cohomology of Fano Varieties. To appear