

Resurgent deformations for an ordinary differential equation of order 2

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Auteur	Delabaere, Eric [1], Rasoamanana, Jean-Marc [2]
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Mots-clés	connection problem [3], resurgence theory [4], Stokes phenomena [5] We consider the differential equation $(d^2/dx^2)\Phi(x) = (P_m(x)/x^2)\Phi(x)$ in the complex field, where P_m is a monic polynomial function of order m . We investigate the asymptotic and resurgent properties of the solutions at infinity, focusing in particular on the analytic dependence of the Stokes-Sibuya multipliers on the coefficients of P_m . Taking into account the nontrivial monodromy at the origin, we derive a set of functional equations for the Stokes-Sibuya multipliers, and show how these relations can be used to compute the Stokes multipliers for a class of polynomials P_m . In particular, we obtain conditions for isomonodromic deformations when $m = 3$
Résumé en anglais	
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Liens

- [1] <http://okina.univ-angers.fr/e.delabaere/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=409](http://okina.univ-angers.fr/publications?f[author]=409)
- [3] [http://okina.univ-angers.fr/publications?f\[keyword\]=14212](http://okina.univ-angers.fr/publications?f[keyword]=14212)
- [4] [http://okina.univ-angers.fr/publications?f\[keyword\]=14208](http://okina.univ-angers.fr/publications?f[keyword]=14208)
- [5] [http://okina.univ-angers.fr/publications?f\[keyword\]=14211](http://okina.univ-angers.fr/publications?f[keyword]=14211)
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