Limit Cycles of Planar Vector-Fields and Analytic Continuation of Taylor Series

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Classical Hilbert's 16'th problem for plane polynomial vector-fields asks for bounding from above the number of isolated periodic trajectories (limit cycles). Recently in our work on a version of H16 for Abel differential equation the question of analytic continuation of Taylor series appeared as one of the very central problems. Around are various problems of "acceleration of convergence", and "numerical analytic continuation" which may be relevant also for finite Taylor polynomials.