On the stable analytic continuation with rational functions

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We discuss the use of rational approximants in the performance of stable analytic extrapolation from interior points of the analyticity domain to other interior points. We show that the instability of analytic extrapolation and the presence of noise sets an upper bound to the number of parameters that can be used in the solution. We generalize this result to other classes of functions which are used to fit experimental data and present a number of practical examples in form factor analysis.