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Constrained Schlesinger system

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We propose a modification of the classical Schlesinger system where some of the independent variables become functions of the other variables. This construction is motivated by considering a special variation of a hyperelliptic curve related to generalized Chebyshev polynomials. We also construct an algebro-geometric solution to the constrained Schlesinger system in terms of such a family of hyperelliptic curves.

This is a joint work with Vladimir Dragovic (UTD).

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