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CONSEQUENCES OF THE MEROMORPHIC EQUIVALENCE OF STANDARD MATRIX DIFFERENTIAL EQUATIONS

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Abstract

In this article we investigate the question how meromorphic differential equations can be simplified by meromorphic equivalence. In the case of equations of block size 1, which generalizes the case of distinct eigenvalues, we identify a class of equations which are simplest possible in the sense that they carry the smallest number of parameters whithin their equivalence classes. We also discuss conditions under which individual equations can be simplified. Particular attention is paid to the requirement that the involved transformations can be explicitly computed.

Keywords. Meromorphic differential equations, meromorphic equivalence, reduction theory, standard equations, isoformal, isomonodromy, piecewise algebraic functions.
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