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B. Heinrich Matzat* (matzat@iwr.uni-heidelberg.de), Im Neuenheimer Feld 368, D-69120
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The (strong) Frobenius structure for differential equations was introduced by B. Dwork for p -adic differential equations. In the case of positive characteristic the existence of a (strong) Frobenius structure is equivalent to the finiteness of the differential Galois group. This fact can be used, for example, to construct additive polynomials with given Galois group and to develop algebraicity criteria in characteristic zero. (Received February 23, 2007)