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On the uniqueness of a power of a meromorphic function sharing a small function with the power of its derivative

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Abstract: In the paper we discuss the uniqueness of the n -th power of a meromorphic function sharing a small function with the power of its k -th derivative and improve and supplement a result of Zhang-Lü [Complex Var. Elliptic Equ. **53** (2008), no. 9, 857–867]. We also rectify one recent result obtained by Chen and Zhang in [Kyungpook Math. J. **50** (2010), no. 1, 71–80] dealing with a question posed by T.D. Zhang and W.R. Lü in [Complex Var. Elliptic Equ. **53** (2008), no. 9, 857–867].

Keywords: meromorphic function, derivative, small function, weighted sharing

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