

Majumder, Sujoy

Nonlinear differential monomials sharing two values. (English) [Zbl 1389.30138](#)
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Summary: Using the notion of weighted sharing of values which was introduced by *I. Lahiri* [*Nagoya Math. J.* 161, 193–206 (2001; [Zbl 0981.30023](#)); *Complex Variables, Theory Appl.* 46, No. 3, 241–253 (2001; [Zbl 1025.30027](#))], we deal with the uniqueness problem for meromorphic functions when two certain types of nonlinear differential monomials namely $h^n h^{(k)}$ ($h = f, g$) sharing a nonzero polynomial of degree less than or equal to 3 with finite weight have common poles and obtain two results. The results in this paper significantly rectify, improve and generalize the results due to *Y.-H. Cao* and *X.-B. Zhang* [*J. Inequal. Appl.* 2012, Article ID 100 (2012; [Zbl 1291.30193](#))].

MSC:

30D35 Value distribution of meromorphic functions of one complex variable, Nevanlinna theory

Keywords:

meromorphic functions; differential polynomials; sharing polynomials; uniqueness problems

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