Eremenko, A.

An analogue of the defect relation for the uniform metric. (English) Zbl 0905.30025

Complex Variables, Theory Appl. 34, No. 1-2, 83-97 (1997).

Let f be a meromorphic function. We use the following denotations:

$$M(r,\infty,f)=\sup_\theta\left|f(re^{i\theta})\right|,\ M(r,a,f)=M\left(r,\infty,\frac{1}{f-a}\right),$$

$$A(r,f)=\frac{1}{\pi}\iint_{|z|\le r}\frac{\left|f'(z)\right|^2}{\left(1+\left|f(z)\right|^2\right)^2}dxdy,\ z=x+iy,$$

$$b(a,f)=\varliminf_{r\to\infty}\frac{\ln^+M(r,a,f)}{A(r,f)}.$$

The author obtains the inequality $\sum_a b(a,f)\le 2\pi$ if for every $a\in$
C, $b(a,f)\le 2\pi$. Thus, we have an analogue of the Nevanlinna defect relation for the values $b(a,f)$. The necessity of introducing $b(a,f)$ appears evident after the paper of W. Bergweiler and H. Bock (1994).

Reviewer: A.F.Grishin (Khar'kov)

MSC:

30D30	Meromorphic functions of one complex variable, general theory
30D35	Value distribution of meromorphic functions of one complex variable, Nevanlinna theory

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