ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

8. Analysis

1991 MS Classification: 30C55
Kayumov, Il'giz, Kazan University, Russia
Asymptotical behaviour of logarithmic coefficients of univalent functions
Let S be the class of all univalent in $E = \{|z| < 1\}$ functions such that $f(0) = f'(0) - 1 = 0$. Let $\log f'(z) = \sum_{n=1}^{\infty} a_n(f) z^n$. Some estimates of coefficients $a_n(f)$ were considered in papers[1], [2]. We prove that

$$\max_{f\in S} \varlimsup_{n\to\infty} |a_n(f)| = \varlimsup_{n\to\infty} \max_{f\in S} |a_n(f)| = A.$$

In addition, we show that $M = \{f \in S : \varlimsup_{n\to\infty} |a_n(f)| = A\}$ is dense in S with respect to the pointwise convergence.

Reference: 1. Leung Y. K., Shober G., Some coefficient problems and applications, *Pacif. J. Math.* **145** (1990), N 1, 71–95
2. Avhadiev F. G., Kayumov I. R., Estimates for Bloch functions and their generalization, *Complex Variables* **29** (1996), 193–201.