Ivanov, K. G.; Saff, E. B.
Nongeometric convergence of best $L_p$ ($p \neq 2$) polynomial approximants. (English)

Summary: For an arbitrary function $f$ analytic in the disk $D$: $|z| < 1$ and continuous in $\bar{D}$, we show that geometric convergence in $D$ of best $L_p$ ($1 \leq p \leq \infty$) polynomial approximants to $f$ on $C$: $|z| = 1$ is assumed only when $p = 2$.

MSC:
41A50 Best approximation, Chebyshev systems
41A10 Approximation by polynomials

Keywords:
least squares; $L_p$-norm; convergence rates; geometric convergence

Full Text: DOI