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ASYMPTOTICS FOR EXTREMAL POLYNOMIALS WITH VARYING MEASURES*

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Abstract. In this paper, we give strong asymptotics of extremal polynomials with respect to varying measures of the form $d\sigma_n = \frac{d\sigma}{|Y_n|^p}$, where σ is a positive measure on a closed analytic Jordan curve C, and $\{Y_n\}$ is a sequence of polynomials such that for each n, Y_n has exactly degree n and all its zeros $(\alpha_{n,i})$, $i = 1, 2, \ldots$, lie in the exterior of C.

Key words. Rational Approximation, Orthogonal Polynomials, Varying Measures.

AMS subject classifications. 30E10, 41A20, 42C05.

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