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# Asymptotic Properties of Extremal Polynomials

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**Abstract.** Given a measure with compact support, one is interested in studying the asymptotic properties of the monic polynomials of minimal  $L^p$  norm with respect to that measure. In the special case  $p = 2$ , these polynomials are just the monic orthogonal polynomials. We will consider a very general family of measures supported on regions with analytic boundary and discuss several asymptotic properties of the extremal polynomials, including the behavior of the  $L^p$  norms, the strong asymptotics outside the region, ratio asymptotics, and the behavior of the Christoffel function inside the support. A special emphasis will be placed on the analogy between results in this setting and orthogonal polynomial theorems on the unit circle.