Gökalp Alpan*, alpan@rice.edu. Szegő Condition on arbitrary subsets of C.

Let $\mu$ be a measure in the complex plane of the form $fds_\gamma$ where $\gamma$ is a union of finitely many disjoint $C^{2+}$ Jordan arcs and curves and $f$ is the Radon Nikodym derivative of $\mu$ with respect to the arc measure $ds_\gamma$ on $\gamma$. If $\log f \in L^1(\mu_\gamma)$ (this is called the Szegő condition) then the orthogonal polynomials associated with $\mu$ obey certain asymptotic properties (Widom 1969). Here $\mu_\gamma$ is the potential theoretic equilibrium measure of $\gamma$.

We discuss how to extend the Szegő condition on arbitrary non-polar compact subsets of the plane. (Received February 04, 2018)