WEIGHTED APPROXIMATION OF DERIVATIVES ON THE HALF-LINE[*]

KATHERINE BALÁZS[†] AND THEODORE KILGORE[†]

Dedicated to Ed Saff on the occasion of his 60th birthday

Abstract. Weighted polynomial approximation of derivatives on the half line $[0, \infty)$ is considered. The weight function will be of the form $e^{-R(t)}$, a "folded" Freud weight. That is, that $R(x^2) = Q(x)$, where $e^{-Q(x)}$ is a Freud weight on $(-\infty, \infty)$. Linear processes which can be used for approximation of derivatives include interpolation, in particular using node-sets recently developed by J. Szabados.

Key words. Freud weights, derivatives, weighted approximation

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