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A NOTE ON THE SHARPNESS OF THE REMEZ-TYPE INEQUALITY FOR HOMOGENEOUS POLYNOMIALS ON THE SPHERE*

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

Abstract. Remez-type inequalities provide upper bounds for the uniform norms of polynomials p on given compact sets K, provided that $|p(x)| \leq 1$ for every $x \in K \setminus E$, where E is a subset of K of small measure. In this note we obtain an asymptotically sharp Remez-type inequality for homogeneous polynomials on the unit sphere in $\mathbb{R}^d$.

Key words. Remez-type inequalities, homogeneous polynomials

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