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Boundary properties of harmonic functions on starlike domains in $\mathbb{R}^n$

I shall present some results recently obtained (with Paul. M. Gauthier) regarding approximating continuous functions by harmonic functions (in the Carleman sense) on some special domains U of $\mathbb{R}^n, n > 1$. In particular, an approximation result on strictly starlike (with respect to the origin and not necessarily bounded) domains in $\mathbb{R}^n$, shall be presented.

It will be shown that the approximation gets better as one moves to the boundary via a subset F whose projection on $\mathbf{S}^{n-1}$ (the unit sphere in $\mathbb{R}^n$) is an F_σ polar set.