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Radial limits of solutions to elliptic partial differential equations

For certain elliptic differential operators L, we study the behaviour of solutions to $Lu = 0$, as we tend to the boundary along radii in strictly starlike domains in $\mathbb{R}^n, n \geq 3$. Analogous results are obtained in other special domains. Our approach involves introducing harmonic line bundles as instances of Brelot harmonic spaces and approximating continuous functions by harmonic functions on appropriate subsets. These approximation theorems on harmonic spaces yield interesting examples for approximation by solutions of $Lu = 0$ on some domains in $\mathbb{R}^n$. Joint work with Mohammad Shirazi.