Finely continuously differentiable functions

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Abstract

The fine topology on Euclidean space $\mathbb{R}^n$ is the coarsest topology which renders all superharmonic functions continuous. Since about 1970, Fuglede and others have developed the theory of finely harmonic functions on finely open subsets of $\mathbb{R}^n$, and finely holomorphic functions on finely open subsets of the complex plane $\mathbb{C}$. This talk will present an explicit description of functions that are continuously differentiable with respect to the fine topology on $\mathbb{R}^n$.