THE BILIPSCHITZ INVARIANCE OF LIPSCHITZ HARMONIC CAPACITY FOR COMPACT SUBSETS OF $\mathbb{R}^d$.

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In joint work with Laura Prat we show that if E is a Cantor set in $\mathbb{R}^d$ formed by intersecting a decreasing family of sets E_n where E_n consists of 2^{nd} cubes in $\mathbb{R}^d$ of side σ_m and where the components of E_{n+1} are the corners of the components of E_n, if T is a bilipschitz self map of $\mathbb{R}^d$, and if κ is the Lipschitz harmonic capacity, then

$$\kappa(T(E)) \leq C_T \kappa(E).$$

The proof uses the theorem of Mateo and Tolsa that

$$\kappa(E) \sim \big(\sum \frac{2^n d}{\sigma_n^{d-1}}\big)^{\frac{1}{2}}$$

and other things.