

1121-35-164

Murat Akman* (murat.akman@icmat.es), Calle de Nicolas Cabrera, No:13-15, Campus de Cantoblanco, UAM, 28049 Madrid, Spain. *Rectifiability, interior approximation, and absolute continuity of Harmonic measure.*

In this talk, we study the rectifiability of a closed set $E \subset \mathbb{R}^{n+1}$ having locally finite n -dimensional Hausdorff measure H^n and satisfying a condition weaker than the lower Ahlfors-David regularity. We show that almost all of E can be covered by a countable union of boundaries of bounded Lipschitz domains contained in the complement of E . By considering $\Omega = \mathbb{R}^{n+1} \setminus E$ and additionally assuming that Ω is connected domain and satisfies an infinitesimal interior thickness condition then we prove that $H^n|_{\partial\Omega}$ is absolutely continuous with respect to harmonic measure for Ω . We also state some local results concerning the decomposition of the boundary into rectifiable and purely unrectifiable parts.

This is a joint work with S. Bortz, S. Hofmann, and J. M. Martell. (Received July 18, 2016)