

72nd Midwest PDE Seminar

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Murat Akman, *Institut Mittag-Leffler*

Sat, Nov 16, 5:20–5:40, REC 121

Hausdorff dimension and p -harmonic measure

Abstract. In the first part of my talk I will discuss Hausdorff dimension of a measure related to a positive weak solution of a certain partial differential equation in a simply connected domain. Our work generalizes work of Lewis and coauthors when the measure is p -harmonic and also for $p = 2$, the well known theorem of Makarov regarding the Hausdorff dimension of harmonic measure relative to a point in a simply connected domain. In the second part of my talk I will present a recent result in the study of Hausdorff dimension of p -harmonic measure for $p \geq n$ when p -harmonic function is defined on an open subset of \mathbb{R}^n and vanishing on a portion of boundary of this open set. Part of this talk is a joint work with John Lewis and Andrew Vogel.