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**Murat Akman\*** ([murat.akman@uky.edu](mailto:murat.akman@uky.edu)), Department of Mathematics, University of Kentucky, Lexington, KY 40508, and **John L Lewis** and **Andrew L Vogel**. *Hausdorff Dimension of a measure associated with a positive weak solution of generalized  $p$ -laplace equation*. Preliminary report.

In this 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. This 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.

I will also explain a possible generalization of this result when the domain is an open subset of  $\mathbb{R}^n$  and describe construction of an example with the Hausdorff dimension of the corresponding measure is  $< n - 1$  when  $p \geq n$ . (Received January 20, 2014)