

**Meeting:** 1004, Bowling Green, Kentucky, SS 12A, Special Session on Partial Differential Equations and Their Applications

1004-35-182      **John L Lewis** and **Andrew L Vogel\*** (alvogel@syr.edu), Syracuse University, 215 Carnegie, Syracuse, NY 13244. *Symmetry Theorems and Uniform Rectifiability*. Preliminary report.

We study overdetermined boundary conditions for positive solutions to some elliptic partial differential equations of  $p$  Laplacian type in a bounded domain  $D$ . We show these conditions imply uniform rectifiability of  $\partial D$  and also that they yield the solution to certain symmetry problems. (Received January 24, 2005)