

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

1004-35-226      **Björn Bennowitz\*** (bbennewi@ms.uky.edu), Department of Mathematics, 719 Patterson Office Tower, University of Kentucky, Lexington, KY 40506-0027. *Uniqueness in a free boundary problem of Lewis and Vogel.*

Lewis and Vogel have shown that the solution of a weak formulation of a free boundary problem for the  $p$ -Laplacian is unique given a certain condition on the boundary and a measure associated with the solution. I will discuss a counterexample which shows that if this condition is dropped the solution is no longer unique. (Received January 25, 2005)