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

1004-35-164 **Robert R Jensen*** (rrj@math.luc.edu), Dept of Math and Statistics, Loyola University Chicago, 6525 N. Sheridan Rd, Chicago, IL 60626. *Recent Results in L-infinity Variational Problems.* Preliminary report.

The infinity Laplacian arises naturally in variational analysis in L^∞ - like the Laplacian arises in variational analysis in L^2. Recently Peres, Schramm, Sheffield, and Wilson discovered a natural way in which the infinity Laplacian arises in game theory. In addition they were able to use game theory to prove uniqueness of solutions. Motivated by their work, this talk will describe other game theory approaches which lead to derivations of even more general Euler equations for L^∞ variational problems, including those with spatial dependence. (Received January 24, 2005)