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**Robert Jensen\*** (rjensen@luc.edu), Dept. Mathematics and Statistics, Loyola University Chicago, 6525 N. Sheridan Rd., Chicago, IL 60626. *On solutions of  $-\Delta_\infty u = g$* . Preliminary report.

In this talk I will explain the significance of Yifeng Yu's result and present a greatly simplified proof, showing the unique dependence of  $g$  on  $u$  for solutions of

$$-\Delta_\infty u = g$$

This is highly non-trivial because solutions of this PDE must be interpreted in the context of viscosity solutions as formulated by M. G. Crandall and P.-L. Lions, which only assumes continuity of the function  $u$ . Yu's result also verified the conjecture that the running cost is unique with respect to the "value function" for the time continuous random tug-of-war game as described in

"Tug-of-war and the infinity Laplacian"

by Yuval Peres, Oded Schramm, Scott Sheffield, and David B. Wilson., *J. Amer. Math. Soc.*, 22(1):167–210, 2009. (Received January 03, 2010)