Maximal Operator for the p-laplacian family

The common thread of this talk will be the equation
\[
\max\{-\Delta_{p_1}u,-\Delta_{p_2}u\}=0.
\]
In the first part of the talk I will introduce the game that we call unbalanced tug-of-war game with noise. We will discuss some aspects of the game and how it is related to the above equation.
In the second part I will introduce a construction that relates the obstacle problem with solutions to maximal equations as the one driving this talk.