

The infinity-Laplace equation

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The infinity-Laplace equation is a distant cousin of the ordinary Laplace equation. It is an interesting fully non-linear partial differential equation and has even been called "the Last Great Scalar Equation". It is remarkable that the equation has been discovered and rediscovered several times, to wit:

- 1) it is the limit of the p -Laplace equations.
- 2) the solutions provide the best Lipschitz extensions.
- 3) it appeared in image processing.
- 4) it is related to game theory (Tug-of-War).
- 5) comparison with cones characterizes solutions.

We plan to introduce the equation and its basic theory. The modern concept of viscosity solutions has a nice use here and so some related basic facts are also treated.