
Limit, as $p \rightarrow \infty$, of solutions to p -Laplace equation with Robin boundary conditions

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We study the behavior when $p \rightarrow \infty$ of the first p -Laplacian eigenvalue with Robin boundary conditions and of the corresponding eigenfunction. We find that the limit of the eigenfunctions is a viscosity solution to an eigenvalue problem for the so called ∞ -laplacian. Moreover, in the second part of the paper, we focus our attention on the p -Poisson equation for a certain f in $L^\infty(\Omega)$ and we study the limit of solutions when $p \rightarrow \infty$.

This is a joint work with Alba Lia Masiello, Carlo Nitsch, Cristina Trombetti.