Motivated by the study of eigenfunctions, we consider the quantitative uniqueness of elliptic equations. The quantitative
uniqueness is characterized by the order of vanishing of solutions, which describes quantitative behavior of strong unique
continuation property. Strong unique continuation property states that if a solution that vanishes of infinite order at
a point vanishes identically. It is interesting to know how the norm of the potential functions and gradient potentials
control the order of vanishing. We will report some recent progresses about quantitative uniqueness in different Lebesgue
$L^p$ spaces for elliptic equations. Carleman estimates play an important role in the strong unique continuation property.
By using some delicate quantitative Carleman estimates, we obtain some Hadamard three-sphere theorems which lead to
the order of vanishing of solutions. (Received March 05, 2017)