

Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5)  
Vol. IV (2005), 59-78

## Summability of semicontinuous supersolutions to a quasilinear parabolic equation

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**Abstract.** We study the so-called  $p$ -superparabolic functions, which are defined as lower semicontinuous supersolutions of a quasilinear parabolic equation. In the linear case, when  $p = 2$ , we have supercaloric functions and the heat equation. We show that the  $p$ -superparabolic functions have a spatial Sobolev gradient and a sharp summability exponent is given.

**Mathematics Subject Classification (2000):** 35K55.