

The Gradients of Parabolic Viscosity Supersolutions

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Abstract:

The point is that viscosity supersolutions (and subsolutions) are not supposed to have derivatives. The talk is about some diffusion equations like the Evolutionary p -Laplace Equation, which are known to develop an interface (free boundary). The spatial gradient and its local summability is my objective. -A simple analogy is the fact that an ordinary superharmonic function (= a viscosity supersolution of the Laplace equation!) has a gradient in Sobolev's sense, though not by definition.