Bellettini, G.; Novaga, M.

Minimal barriers for geometric evolutions. (English) Zbl 0882.35028

J. Differ. Equations 139, No. 1, 76-103 (1997).

Minimal barriers have been introduced by De Giorgi in order to provide a notion of weak solution for partial differential equations as, for example, the mean curvature flow, which is suitable to describe the evolution even past singularities. The authors study general properties of minimal barriers for the evolution equation $\partial u/\partial t+F(\nabla u,\nabla^2 u)=0$. They prove that for lower semicontinuous F local and global barriers are the same. Further, they show that in this case the minimal barrier coincides with that one where F is replaced by F^+, the smallest degenerate elliptic function above F. One section is devoted to the joint and disjoint set property in terms of the function F.

Reviewer: B.Priwitzer (Tübingen)

MSC:

35D10 Regularity of generalized solutions of PDE (MSC2000)
35K55 Nonlinear parabolic equations
35K40 Second-order parabolic systems

Cited in **2** Reviews
Cited in **12** Documents

Keywords:

evolution past singularities; mean curvature flow

Full Text: DOI

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