

**THE CONSTRUCTION OF SINGULAR CURVES FOR GENERALIZED  
SOLUTIONS OF EIKONAL-TYPE EQUATIONS WITH A CURVATURE BREAK  
IN THE BOUNDARY OF THE BOUNDARY SET**

Received November 05, 2015

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The problem of singularities appearing in generalized solutions of the boundary value Dirichlet problem for eikonal-type first-order partial differential equations is considered. The object of study is the pseudovertices of the boundary set. Finding the pseudovertices is an element of the procedure for constructing branches of the singular set. Necessary conditions of pseudovertex existence are obtained under weakened assumptions on the smoothness of the boundary of a nonconvex boundary set. The situation of the first-order smoothness of the boundary and breaks of the second-order derivatives is studied. The necessary conditions are written in terms of the stationarity of coordinate functions and with the use of one-sided curvatures.

Keywords: first-order PDE, minimax solution, wavefront, diffeomorphism, eikonal, curvature, optimal result function, singular set, symmetry.

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Cite this article as:

A. A. Uspenskii, P D. Lebedev. The construction of singular curves for generalized solutions of eikonal-type equations with a curvature break in the boundary of the boundary set, *Trudy Inst. Mat. Mekh. UrO RAN*, 2016, vol. 22, no. 1, pp. 282–293 .