

ABSTRACT

" Singular Neumann boundary condition for a class of fully nonlinear parabolic equations "

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In this talk, we discuss singular Neumann boundary problems for a class of nonlinear parabolic equations in one space dimension.

Our boundary problem describes motion of a planar curve sliding along the boundary with a zero contact angle, which can be viewed as a limiting model for the capillary phenomenon.

We study the unique existence and the behavior of solutions depending on the form of the parabolic equation.

In particular, the result shows that "instantaneous blow-up" occurs on the boundary assuming a specific condition for the parabolic equation.

This talk is based on the joint work with Qing Liu.