

Blowup rate estimates for the heat equation with a nonlinear gradient source term

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In this talk, we shall present some recent results on the blowup of solutions of the initial boundary value problem for the heat equation with a nonlinear gradient source term. It is shown that the blowup rate will never match that of the self-similar variables. In the one space dimensional case when assumptions are made on the initial data so that the solution is monotonically increasing in time, the exact blowup rate is found.