

A sufficient condition for the continuity of solutions to a logarithmic diffusion equation

NAIAN LIAO

Abstract. This note gives a first sufficient condition that ensures a non-negative, locally bounded, local solution to a logarithmically singular parabolic equation is continuous at a vanishing point and an estimate of the modulus of continuity is given. Moreover, an estimate of the Hausdorff measure of the set of discontinuity is established.

Mathematics Subject Classification (2010): 35K67 (primary); 35B65, 35B45 (secondary).