K. Lee

Hölder Regularity of Solutions to Degenerate Elliptic and Parabolic Equations.

Abstract: We are going to discuss the Alexandroff-Bakelman-Pucci estimate, the Harnack inequality, and the Hölder continuity of solutions to degenerate parabolic equations of the non-divergence form

$$(0.1) \quad Lu := x\, a_{11}\, u_{xx} + 2\sqrt{x}\, a_{12}\, u_{xy} + a_{22}\, u_{yy} + b_1\, u_x + b_2\, u_y - u_t = g$$

on $x \geq 0$, with bounded measurable coefficients. Then we also cosider the application in the free boundary problems.