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Boundary regularity for Monge–Ampère equations with unbounded right hand side

OVIDIU SAVIN AND QIAN ZHANG

Abstract. We consider Monge–Ampère equations with right hand side f that degenerate to ∞ near the boundary of a convex domain Ω, which are of the type

$$\det D^2 u = f \quad \text{in } \Omega, \qquad f \sim d_{\partial\Omega}^{-\alpha} \quad \text{near } \partial\Omega,$$

where $d_{\partial\Omega}$ represents the distance to $\partial\Omega$ and $-\alpha$ is a negative power with $\alpha \in (0, 2)$. We study the boundary regularity of the solutions and establish a localization theorem for boundary sections.

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