数学与统计学院
在线学术报告

题　　目： Regularity, extinction and bubbling for fast diffusion equations in bounded domains

主要内容：

We will first show optimal boundary regularity for bounded positive weak solutions of fast diffusion equations in smooth bounded domains. This solves a problem raised by Berryman and Holland in 1980 for these equations in the subcritical and critical regimes. Then we study extinction profiles of solutions to Sobolev critical fast diffusion equations with the Brezis-Nirenberg effect. We show that the convergence rates of the relative error in regular norms are at least polynomial. Exponential decay rates are proved for generic domains. Results for Sobolev subcritical fast diffusion equations are also obtained. Our proof makes use of regularity estimates, a curvature type evolution equation, as well as blow up analysis.　This is joint work with Jingang Xiong.

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