



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PHD STUDENT SEMINAR

**Boundary Regularity of Solutions to the Fractional Porous
Medium Type Equation**

By

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Abstract

We study the boundary regularity of nonnegative viscosity solutions to fully nonlinear parabolic equations of fractional porous medium-type in bounded domains. We consider the class of nonlocal operators $\mathcal{L}_* \subset \mathcal{L}_\theta$, where \mathcal{L}_θ is the class defined by Caffarelli and Silvestre. Actually, for fully nonlinear elliptic operator I with respect to \mathcal{L}_* , we study the global Hölder regularity of $u/\text{dist}(x, \partial\Omega)^\delta$, where u is a solution to $\partial_t u - u^\gamma I(u) = 0$ in $I \times \Omega$, $u = 0$ in $I \times \Omega^c$.

Date : 12 May 2026, Tuesday

Time : 11:30am (* revised)

Venue : Room 4475 (Lifts 25/26) (* revised)

All are Welcome!