



**THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY**

**Department of Mathematics**

**SEMINAR ON PDE**

**Nonlinear Diffusion Equations driven by  
p-Laplacian operators of nonlocal type**

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**Abstract**

We will first review some basic models of nonlinear diffusion. The usual  $p$ -Laplacian is a model of strongly nonlinear operator with a well-developed elliptic and parabolic theory. In recent years, interest has focused on versions of this model that include nonlocal effects of fractional type. We describe recent results obtained for the nonlocal parabolic theory for  $p$  finite. Finally, we discuss a nonlocal infinity Laplacian model motivated by a tug-of-war process introduced by Bjorland, Caffarelli and Figalli.

**Date: 11 November 2022 (Friday)**

**Time: 4:00pm**

**Zoom Meeting: <https://hkust.zoom.us/j/83675626006> (Passcode: 221111)**

*All are Welcome!*