Monday's Nonstandard Seminar 35

14:00

Author: Sukjung Hwang (Yonsei University, Seoul, South Korea)

Title: **Existence and regularity results of porous medium type equations with drift term**

Abstract: In this talk, we consider the porous medium equation with drift term in divergence form that can be applied to fluid dynamics and mathematical biology. First part of the talk is about providing sharp conditions on the drift in $L_x^p L_t^q$ type space concerning the local continuity of a nonnegative weak solutions (joint work with K. Kang and Y. P. Zhang). Then I would like to introduce recent results of the existence of nonnegative weak solutions in the Wasserstein space and the corresponding scaling invariant classes of the drift (joint work with K. Kang and H. Kim).