

Speaker: Matteo Muratori

Title: *Optimal existence theory for a weighted PME with large data*

Abstract:

We consider solutions of a Euclidean Porous Medium Equation with a weight that decays at infinity like a power. In particular, we show local-in-time existence and uniqueness for a class of initial data which can grow with a specific power rate, in a suitable average sense. We also identify global-existence and blow-up classes, whose respective forms point towards the optimality of such growth rate, at least for positive solutions.