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Title: Viscosity solutions for nonlocal equations with space-dependent operators

Abstract:

This talk focuses on a nonlocal operator of fractional-laplacian type, where integration is taken on a variable domain. Similar operators arise naturally in the hydrodynamic limit of suitable kinetic equations in bounded domains.
We prove that the associated elliptic and parabolic problems admit a unique viscosity solution. In addition, we study the corresponding eigenvalue problems.
This is a joint work with Ulisse Stefanelli.