The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on PDE

Nonlocal operators with singular anisotropic kernels

By

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Abstract

We study nonlocal operators acting on functions in the Euclidean space. The operators under consideration generate anisotropic jump processes, e.g., a jump process that behaves like a stable process in each direction but with a different index of stability. Its generator is the sum of one-dimensional fractional Laplace operators with different orders of differentiability. We study such operators in the general framework of bounded measurable coefficients. We prove a weak Harnack inequality and Hölder regularity results for solutions to corresponding integro-differential equations. The talk is based on a recent joint work with Jamil Chaker.

Date :   Tuesday, 13 March 2018

Time: 3:30 p.m. – 4:30 p.m.

Venue: Room 5506, Academic Building, HKUST (near Lifts 25&26)

All are welcome!