The Hong Kong University of Science and Technology
Department of Mathematics

Seminar on PDE
Nonlocal operators with singular anisotropic kernels

By
Prof. Moritz KASSMANN
University of Bielefeld, Germany

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!