Fri., August 8	11:20 $\sim$ 11:45	Mugunghwa	25min talk

An L_p-theory for a class of non-local elliptic equations related to nonsymmetric measurable kernels

Ildoo Kim (waldoo@korea.ac.kr)
Korea University, Korea

We study the integro-differential operators L with kernels $K(y) = a(y)J(y)$, where $J(y)dy$ is a Lévy measure on $\mathbb{R}^d$ (i.e. $\int_{\mathbb{R}^d}(1 \wedge |y|^2)J(y)dy < \infty$) and $a(y)$ is an only measurable function with positive lower and upper bounds. Under few additional conditions on $J(y)$, we prove the unique solvability of the equation $Lu - \lambda u = f$ in L_p-spaces and present some L_p-estimates of the solutions. In this talk, we present a brief history and key ideas to get L_p-solvability of this type non-local ellpitic equations.