

Speaker: Anton Dereventsov

Title: The rescaled X -greedy algorithm

Abstract: Greedy algorithms are designed to approximate an element of a space by a linear combination of the elements of the fixed set (dictionary). In the Hilbert space setting the simplest greedy algorithm (the Pure Greedy Algorithm) always converges and the rate of convergence is known (almost). The X -Greedy Algorithm is a natural extension of the PGA to the Banach space setting. Unfortunately, the convergence of the XGA is still unknown even for uniformly smooth Banach spaces. In this talk we discuss a simple modification of the XGA which guarantees the convergence for any element of the space and the optimal convergence rate on the convex hull of the dictionary.