

In this talk we will cover two different topics. At first, we will present Rank LASSO, which aims at identifying important regressors in the single index model, where the link function and the distribution of the error terms are unknown. This is a joint work with Wojciech Rejchel from the Nicolaus Copernicus in Torun, Poland. In the second part I will talk about localization of genes by the selection of covariates for the mixed model, where mean of the random effect is different from zero. This is a joint work with Piotr Szulc from University of Wroclaw, Jonas Wallin from Lund University, David Siegmund from Stanford University and Rebecca Doerge from Carnegie-Mellon University.