

Nonparametric regression for group testing data

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We consider a regression model where the binary response variables are not accessible for each corresponding explanatory variable but only the maxima of the responses over heterogeneous data groups are observed. Such models are frequently referred to as group testing problems. We introduce a nonparametric estimator for the desired regression function, investigate its asymptotic properties and study its finite sample performance based on numerical simulations. A data-driven bandwidth selector as well as application to a real data set is provided. Moreover, extensions to the case of inaccurate measurements are discussed. This talk is based on a joint work with A. Delaigle (University of Melbourne, Australia).