

# Efficient Nonparametric Classifier for High Dimensional Multiclass Problems

by

*Yufeng Liu*

*University of North Carolina*

*Department of Statistics and Operations Research, CB 3260*

*Chapel Hill, NC 27599*

*yfliu@email.unc.edu*

## **Abstract**

Classification is an important statistical tool for information extraction from complex data. With the abundance of massive and complex data across many different fields, efficient and accurate classifiers for multiclass problems are greatly needed. In this talk, I will present an efficient nonparametric classification technique to handle multiclass problems. Unlike common traditional model-based classification techniques, the proposed method does not impose strong model assumptions on the data and thus it can be viewed as a nonparametric method. Issues on class probability estimation and variable selection will be discussed. Numerical examples are used to demonstrate the competitive performance of the proposed method.