Course title: Computational Statistics

Instructors: Professor Xiaoming Huo (Georgia Tech); huo@gatech.edu

Where/URL to access course materials: tinyurl.com/StatComCDC

Course overview (**schedule**)

- 8:30 -9:30 Lecture 1: Introduction
- 9:45 -10:45 Lecture 2: Classification
- 11:00 -12:00 Lecture 3: Clustering
- 12:00 -1:15 Lunch
- 1:15 -2:15 Lecture 4: Tree-based Methods
- 2:30 -3:30 Lecture 5: Principal Component Analysis
- 3:45 -4:15 Lecture 6: Summary
- 4:15 Adjourn

Summary. The lecture notes are downloadable from a GitHub repository (see the above) and are mostly written/supplemented in *Jupyter notebooks*, which facilitate interactions with other software packages (mostly Python). I will demonstrate the interactions during the lectures. Students are not required to download any software during the class. If you want to regenerate the course slides, you may need to install some software. I will give information in class.

About the instructor Xiaoming Huo is a professor at the Stewart School of Industrial & Systems Engineering at Georgia Tech. Dr. Huo's research interests include statistical theory, statistical computing, and issues related to data analytics. He has made numerous contributions on topics such as sparse representation, wavelets, and statistical problems in detectability. His papers appeared in top journals, and some of them are highly cited. He is a senior member of IEEE since May 2004. He was a Fellow of IPAM in September 2004. He won the Georgia Tech Sigma Xi Young Faculty Award in 2005. His work has led to an interview by Emerging Research Fronts in June 2006 in the field of Mathematics — every two months, one paper is selected. Dr. Huo received an M.S. degree in electrical engineering and a Ph.D. degree in statistics from Stanford University, Stanford, CA, in 1997 and 1999, respectively. He participated the 30th International Mathematical Olympiad (IMO), which was held in Braunschweig, Germany, in 1989, and received a golden prize.