

# ST 590G: Computation for Data Analysis

## Fall 2009

### Syllabus

Time: Tuesday and Thursday, 10:15-11:30 am  
SAS Hall, Room 1107

Prerequisites: ST 445 or SAS skills at Base SAS Certification Level  
ST 430 (or concurrent)

This course is designed to extend the skills acquired in ST445 to do automated data acquisition, generation, and analysis. Students should have a sound background in SAS sufficient to handle most data acquisition tasks: column, formatted, & free-format reads, single record to multiple observation, multiple records to single observation, reading spreadsheets. The topics will be motivated by interesting and challenging problems that involve automating these procedures.

Tentative list of topics:

- 1) Review of data acquisition tools in SAS
- 2) Basic simulation tools in SAS
- 3) Basic ODS
- 4) Text/data parsing and analysis
- 5) Basics of macros
- 6) Automated data extraction
- 7) Further simulation tools (permutation tests, bootstrap, etc.)
- 8) as time permits... (Databases & PROC SQL, PROC IML, UNIX tools)

At present, three short projects and one longer project are planned as the assignments for the course. From time to time, short problems will be assigned to be done in class.

Letter grades will be assigned. I expect students to attend class, but I will not take attendance.

John Monahan  
5224 SAS Hall  
(515-) 1917  
monahan@stat.ncsu.edu