Host: Rongjie Lai

Prof. Stephen Wright

Wisconsin Madison University

Lecture 1 "Fundamental Optimization Methods in Data Analysis"

Optimization formulations and algorithms are vital tools for solving problems in data analysis. There has been particular interest in some fundamental, elementary, optimization algorithms that were previously thought to have only niche appeal. Stochastic gradient, coordinate descent, and accelerated first-order methods are three examples. We outline applications in which these approaches are useful, discuss the basic properties of these methods, and survey some recent developments in the analysis of their convergence behavior.

> Date: Monday, March 21, 2016 Time: 4:00pm—5:00pm Place: Amos Eaton 214

Refreshments: 4th Floor Amos Eaton @ 3:30pm

Reception immediately following lecture, 4th Floor Amos Eaton

