University of Chicago and Toyota Technological Institute at Chicago
Machine Learning Seminar Series

PRESENTS:

Dan McDonald

UChicago Statistics

Title: Trend Filtering in exponential families

Abstract: Trend filtering is a modern approach to nonparametric regression thatis more adaptive to local smoothness than splines or basisprocedures. Current analysis of trend filtering focuses on estimatinga function corrupted by Gaussian noise, but our work extends thistechnique to general exponential family distributions. This extensionis motivated by the need to study massive, gridded climate dataderived from polar-orbiting satellites. We present algorithms tailoredto large problems, theoretical results for general loss functions, andprincipled methods for tuning parameter selection without excesscomputation.

Bio: Daniel McDonald, Visiting Assistant Professor of Statistics, studies applications of statistical machine learning. Most of his work involves providing theoretical justification for existing methodology. He is also interested in computational approximations; time series; and applications in economics, climate science, and chemistry. McDonald is visiting from Indiana University, Bloomington where he is Associate Professor of Statistics and Adjunct Associate Professor of Computer Science.

Host: Rebecca Willett

Wednesday, May 29, 1:00 – 2:00 pm
Saieh Hall of Economics (SHFE) Room 203
Pizza provided by UChicago CS Department