

# COLLOQUIUM

Department of Statistics and Probability  
Michigan State University

**Lifeng Wang**

Department of Statistics and Probability  
Michigan State University

## **Boosting for High-Dimensional Linear Models with Grouped Variables**

Tuesday, November 24, 2009

A405 Wells Hall

10:20 a.m. - 11:10 a.m.

Refreshments: 10:00 a.m.

### **Abstract**

In regression analysis, variables can often be combined into groups based on prior knowledge. Such a group structure of the predictor variables must be effectively utilized in regression analysis in order to improve identification of relevant groups of variables and to improve the prediction performance. To address this issue, we propose a general boosting framework for high-dimensional functional additive models. Under this framework, we investigate the theoretical properties of a groupwise L2-Boosting method which can effectively account for the grouping structures. Its empirical performance will be demonstrated through both simulated and real world data.

*To request an interpreter or other accommodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.*