

RUTGERS UNIVERSITY
DEPARTMENT OF STATISTICS AND BIostatISTICS
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Seminar

Speaker: **Professor Lauren Hannah**
Department of Statistics
Columbia University

Title: **Stochastic Approximation with Side Information**

Time: **3:20 – 4:20pm, Wednesday, October 8, 2014**

Place: **552 Hill Center**

Abstract

We consider a stochastic optimization problem that involves sequentially sampling from a noisy objective function. Each sample, however, does not contain any gradient information and also depends on an observable, random covariate, called side information. The goal is to find a decision that minimizes the expected objective function given side information. We present a novel algorithm to solve this problem for continuous decisions and a convex objective function, along with giving convergence criteria. The proposed method, Localizing Stochastic Approximation (LSA), decomposes the global problem into a set of adaptively localized stochastic approximation problems. We apply the method to a commercial building set point control problem.

**** Refreshments will be served @2:50pm in Room 502 Hill Center ****