Title: Penalized Estimation of High Dimensional Directed Networks

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Time & Place:
Monday, Jan. 27, 2014, 4:00-5:00pm
Room 331 SMI
(Cookies & Coffee @ 3:30 in Rm 1210 MSC)

Abstract:
Directed networks are widely used to model the interactions among components of complex social and biological systems, particularly when such interactions have causal interpretations. However, estimation of directed networks from observational or steady-state data is in general challenging and the direction of the edges may not be estimable. I will present penalized estimation procedures for estimation of high dimensional directed networks from diverse data types. I will discuss the asymptotic properties of the proposed estimators, and examine their small sample behavior using both simulated and real data examples.