Speaker: Sham Kakade

Title: Deterministic Calibration and Nash Equilibrium Joint work with: Dean Foster

Abstract: The most central question for justifying any game theoretic equilibrium as a general solution concept is: can we view the equilibrium as a convergent point of a sensible learning process? In this talk, I'll provide a natural learning process in which the frequency of empirical play converges into the set of convex combinations of Nash equilibria. The learning process is the most traditional one: players make predictions of their opponents and take best responses to their predictions. A key distinction is that in this learning process players use "public" predictions formed by an accurate (eg calibrated) prediction algorithm. The rationality of the setting rests on a technical result in which we establish the existence of a deterministic (ie public) prediction algorithm that is weakly calibrated.