Speaker: Nicole Immorlica, Microsoft Research

Title: Constrained Signaling for Revenue and Welfare Maximization

Abstract: We consider auction settings where the seller is constrained in the amount and nature of information he may reveal about the good being sold. This is encountered, for example, in online advertising auctions, where communicating precise details of every viewer to interested advertisers is impractical, costly, and possibly socially undesirable. We initiate the study of constrained signaling in such settings, where a seller must choose which information to reveal subject to exogenous constraints on the signaling policy. We consider a seller employing the second-price auction, and present algorithms and hardness results for approximating the welfare and revenue maximizing signaling policies under a variety of constraints.

Joint work with Shaddin Dughmi and Aaron Roth.