Bidding for Sponsored Link Advertisements at Internet Search Engines

Abstract: This talk presents my work to date on search engine advertising. I begin by demonstrating the problems with early search engine advertising, especially the instability and strategic behavior resulting from the first-price mechanism. I then develop a model of the current generalized second-price mechanism, and I use the model to identify and analyze a possible equilibrium of that mechanism. Next, I use a simulated bidding environment to confirm the individual rationality of playing the specified equilibrium strategy, and to compare widely-used bidding strategies. I conclude with policy analysis and counterfactuals computed through simulation.