2018 SIGecom Test of Time Award Goes to First Analyses of the Generalized Second Price Auction (GSP) for Sponsored Search

The SIGecom Test of Time Award recognizes the author or authors of an influential paper or series of papers published between ten and twenty-five years ago that has significantly impacted research or applications exemplifying the interplay of economics and computation.

The winners of the 2018 Award are:
- Varian, Hal R. "Position auctions." international Journal of industrial Organization 25.6 (2007): 1163-1178.
- Edelman, Benjamin, Michael Ostrovsky, and Michael Schwarz. "Internet advertising and the generalized second-price auction: Selling billions of dollars worth of keywords." American economic review 97.1 (2007): 242-259.
- Aggarwal, Gagan, Ashish Goel, and Rajeev Motwani. "Truthful auctions for pricing search keywords." Proceedings of the 7th ACM conference on Electronic commerce. ACM, 2006.

At the time of the writing of these papers, the Generalized Second-Price Auction (GSP) had become the most common form of selling sponsored search advertising, totaling tens of billions of dollars per year. Yet the game-theoretic properties of the mechanism were not understood. It was known that bidding truthfully is not the best strategy for an advertiser, but it was not known how an advertiser should bid. It was also not known what the revenue and efficiency properties of the mechanism are. These three papers independently introduced the first game-theoretic models and analyses of the mechanism. This laid the groundwork for a large body of papers that followed—a literature that remains active to this day. That groundwork also ended up serving as a first step toward studying improvements to the vanilla GSP mechanism, and today basically all sponsored search auctions use enhanced GSP variants.

The Award will be presented at the ACM Conference on Economics and Computation in Ithaca, NY, USA, June 18-22, 2018.

On behalf of the Award Committee,
Tuomas Sandholm (Chair)
Nikhil Devanur
Robert Kleinberg