

Editor’s Introduction

It is my pleasure to introduce Issue 10.2 of SIGecom Exchanges. In addition to puzzles, this issue features nine contributions on topics varying from social experiments, to game theory and mechanisms design, to matching markets, to trading agent design, and to online advertising.

The issue starts with a letter by Suri and Watts on a series of networked public goods experiments conducted on Amazon Mechanical Turk. In contrast to previous work on human cooperation, they find that network topology has no significant effect on average contributions of the players. They also show how one can take advantage of the network by using altruistic seed players to stimulate cooperation.

The next five letters concern several game-theoretic or mechanism design topics. Halpern and Pass discuss how cost of computation can be incorporated into game theory. With several examples, they show that taking computation into account can explain observed behavior in a number of games without resorting to ad hoc cognitive or psychological models. Nisan, Schapira, Valiant, and Zohar consider the incentive compatibility of best-response dynamics. They identify a class of games for which repeated best-response is the best course of action for every player given that other players are repeatedly best responding. For games with both low-quality and high-quality equilibria, Balcan studies the possibility to “nudge” behavior into a high-quality equilibrium by publicly advertising a strategy that only a fraction of players follow. Bhaskar, Fleischer, and Anshelevich examine the network routing game in a flow-over-time model and provide the first upper bound on the price of anarchy for general networks in such a model. The last letter in this group is by Cai, Daskalakis, and Weinberg, who discuss their near-optimal, efficient algorithms for the multi-dimensional mechanism design problem in two scenarios – when the number of bidders is constant and when the number of items is constant, each with a different bidder valuation assumption.

The next three letters focus on matching markets, trading agent design, and online advertising respectively. Alaei, Jain, and Malekian provide the first direct characterization of competitive equilibria in two-sided matching markets when agents have general (non-quasilinear) utilities. The characterization is based on induction, and is therefore constructive. Pardoe and Stone report recent progresses on designing adaptive trading agents that can take advantage of previous experience in similar markets when participating in a new market. Their TacTex agent is the reigning champion in both the supply chain management and the ad auctions Trading Agent Competitions. Devanur considers the online problem of allocating slots to advertisers in ad auctions with budgeted bidders. Under some stochastic assumptions on advertisers’ bids, he discusses online algorithms that can get around the impossibility results in the worst-case model.

Finally, there are the puzzles. Our Puzzle Editor, Daniel Reeves, brings a puzzle titled *Borrowing in the Limit as our Nerdiness Goes to Infinity*. This puzzle concerns the equivalence between paying money back in a lump sum and paying it back continuously over a fixed period of time. There is also a solution by Karanikolas,

Kyropoulou, and Sørensen to Issue 9.1's puzzle, *Borrowing as Cheaply as Possible*. The crux of their solution is a minimum cost flow model for the problem.

I would like to thank our Information Director, Felix Fischer, who has been very helpful in putting this issue together.

Yiling Chen
Editor-in-Chief