Editor's Introduction

I am very happy to introduce Issue 9.1 of SIGecom Exchanges. All the contributions in this issue concern markets of various kinds. In "The Pathologies of Online Display Advertising Marketplaces," Edelman discusses various challenges faced by marketplaces for banner ads on websites (in contrast to ads displayed next to search results). In "Designing Aggregation Mechanisms for Reputation Systems in Online Marketplaces," Aperjis and Johari discuss mechanisms for aggregating ratings that a seller has received; they consider mechanisms that average over a fixed window of past transactions (and discuss how to optimize the window size), as well as a broader class of mechanisms. In "Matching, Cardinal Utility, and Social Welfare," Anshelevich and Das discuss matching markets where the participants' preferences are modeled cardinally (whereas they are often modeled ordinally in this type of market). In "Competitive Equilibria in Matching Markets with Budgets," N. Chen, Deng, and Ghosh consider the Shapley-Shubik assignment model (with general utility functions) and extend it with budget constraints; they then study how to compute a competitive equilibrium (if one still exists). In "Connections Between Markets and Learning," Y. Chen and Vaughan discuss the mathematical connections between market maker mechanisms for prediction markets, and no-regret learning, showing that any cost-function-based prediction market with bounded loss can be interpreted as a no-regret learning algorithm, and studying what the resulting no-regret learning algorithms look like. In "Competition in Mechanisms," Pai considers settings with multiple sellers that compete with each other by announcing mechanisms, and discusses some of the key issues as well as recent results. Finally, in "Approximability of Combinatorial Problems with Multi-agent Submodular Cost Functions," Goel, Karande, Tripathi, and Wang consider computational problems that come up in winner determination in combinatorial procurement auctions: a feasible set of elements must be selected, and there are multiple agents that can provide subsets of these elements. They consider the case where each agent has a submodular cost function, and establish upper and lower bounds on the approximability of these problems.

Finally, there are the puzzles. The new Editor's Puzzle considers a scenario where agents are willing to lend to other agents with various profit expectations as well as limitations on how much they can lend, and asks to find the cheapest arrangement for a particular agent to borrow a particular amount of money. There is also a solution by He to the puzzle in Issue 7.1 on combinatorial auction winner determination. (There is no solution yet to the puzzle "A Dutch Dutch Auction Clock Auction" from the previous issue, 8.2.)

I would like to thank the reviewers for this issue, as well as our Information Director Daniel Reeves who has once again been very helpful in putting this issue together.

Enjoy!

Vincent Conitzer
Editor-in-Chief