

Editor's Introduction

I am very happy to introduce Issue 8.1 of SIGecom Exchanges.

This issue starts with a conference announcement and a book review. Rossi and Tsoukias announce the first edition of a new conference on Algorithmic Decision Theory (ADT-09), to be held in Venice, Italy. The conference aims to bring together researchers from decision theory, discrete mathematics, theoretical computer science, and artificial intelligence. Then, Aziz reviews the book “Social and Economic Networks” by Matthew O. Jackson, which gives an overview and synthesis of techniques from a variety of fields for the analysis of such networks.

The first four letters concern the design of auctions and other mechanisms. Ashlagi, Dobzinski, and Lavi consider the problem of designing mechanisms to schedule jobs on unrelated machines. The goal is to minimize the makespan. They examine the Nisan-Ronen conjecture that no truthful mechanism achieves an approximation ratio better than the number of machines, and prove that the conjecture holds for *anonymous* mechanisms. Hartline and Roughgarden consider the problem of creating “optimal” mechanisms, that is, mechanisms that maximize expected revenue. In particular, they study simple mechanisms such as VCG with reserve prices, VCG with anonymous reserve prices, and VCG without any reserve prices, and they consider how close these come to optimality, in several different senses. Herings, Müller, and Vermeulen give a survey of *bisection auctions*, which are iterative auctions that aim to minimize the information communicated by bidders by performing a type of binary search on the valuation space. Finally, Vorobeychik engages in simulation-based analyses of strategic behavior in keyword auctions that are difficult to solve analytically. Some of his noteworthy conclusions are that generalized second price mechanisms are far from truthful and that ranking by bid tends to produce higher profit than ranking by revenue.

The next four letters concern other game-theoretic topics. Ackermann, Goldberg, Mirrokni, Röglin, and Vöcking consider two-sided matching markets without a central authority, and study whether better-response and best-response dynamics converge to a stable matching, and, if so, whether they do so quickly. Chalkiadakis, Elkind, Markakis, Polukarov, and Jennings consider coalitional games in which an agent can simultaneously be part of multiple (partial) coalitions by devoting only some of her resources to each of these coalitions. They introduce various notions of stability, and also instantiate their framework on some specific games. Chawla, Niu, and Roughgarden consider networks where every seller owns a single edge, and every consumer is interested in purchasing a path from its source vertex to its sink vertex. They study Bertrand games where sellers first set prices, and then consumers make their purchases. They give bounds on the price of anarchy (the cost of selfish behavior) in these games. The last letter in this group is by Montanari and Saberi, who study a simple game-theoretic model for the spread of an innovation in a network. Perhaps surprisingly, they show that well-connected graphs lead to slow convergence.

Finally, there are the puzzles. The new Editor's Puzzle concerns a group of Japanese warriors who are trying to identify the champion among them, through a sequence of challenges in which they cannot evaluate their own performance. There is also a solution by Sharma and Verwer to the previous issue's puzzle. They derive a simple expression for the final fraction of agents that adopt technology B in that puzzle.

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