Guest Editorial: Special Issue on Algorithmic Game Theory

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The Symposium on Algorithmic Game Theory (SAGT) is a well-established yearly event aimed at gathering worldwide experts, such as computer scientists, mathematicians and economists, working at the intersection of Algorithms and Game Theory. This volume contains the extended versions of five among the best papers accepted to the Tenth Edition of SAGT, which was held in L'Aquila, Italy, during September 2017.

The selected papers are the following:

- *Tight Welfare Guarantees for Pure Nash Equilibria of the Uniform Price Auction* by Georgios Birmpas, Evangelos Markakis, Orestis Telelis and Artem Tsikiridis (co-recipient of the SAGT 2017 best paper award), which resolves an open problem in multi-unit auctions by providing the exact bound on the price of anarchy of the uniform price auction for bidders with submodular valuations;
- *Online Random Sampling for Budgeted Settings* by Alon Eden, Michal Feldman and Adi Vardi (co-recipient of the SAGT 2017 best paper award), which contributes efficient truthful mechanisms for multi-unit auctions selling either divisible and indivisible goods to a set of strategic budgeted bidders with additive valuations arriving over time;

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- *Tradeoffs Between Information and Ordinal Approximation for Bipartite Matching* by Elliot Anshelevich and Wennan Zhu, which designs constant approximation algorithms for the problem of computing the maximum-weight matching in a complete bipartite graph when only the ordered preferences of the vertices are known;

- *Opinion Formation Games with Aggregation and Negative Influence* by Markos Epitropou, Dimitris Fotakis, Martin Hoefer and Stratis Skoulakis, which enriches the well-studied game based on the famous model of opinion formation of Friedkin and Johnsen by adding the influence of the average public opinion in the definition of the players' cost functions;

- *The Real Computational Complexity of Minmax Value and Equilibrium Refinements in Multi-player Games* by Kristoffer Arnsfelt Hansen, which shows that many decision problems involving the existence of refined notions of equilibrium (such as trembling hand perfect equilibrium and proper equilibrium, to name a few) in games with at least three players are ETR-complete.

We are largely indebted to all people and institutions that contributed to the success of both the conference and this special issue. Our warmest thank goes to all of them.

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