

CALL FOR PAPERS

IEEE JSAC Special Issue on Game Theory for Networks

The emergence of large-scale and decentralized heterogeneous networks operating under dynamic and uncertain environments imposes new challenges in the design, analysis, and optimization of networks. Among the different mathematical theories that can be used to study and develop such networks, game theory is very promising as it can capture many of the intrinsic features of these networked systems. This special issue aims to gather cutting-edge contributions from academia and industry that address and show the latest results on developing game-theoretic models for emerging networking applications. We solicit high-quality original research papers on advanced game-theoretic techniques that go beyond classical models and solution concepts, thereby making the vision of large-scale, heterogeneous, dynamic and self-adapting networks a reality. Suitable topics include, but are not limited to, the following areas:

- New equilibrium concepts beyond Nash theory that can capture the realistic features of emerging networking applications.
- Smart and self-organizing mechanisms using game-theoretic constructs under computational and cooperation constraints.
- Dynamic and stochastic games with networked applications in sectors of transportation, sensor, and social networks.
- Advanced and practical learning mechanisms for flexible networked systems operating under uncertainties.
- Cooperative game and bargaining models for incentivizing and maintaining cooperation in future networks.
- Novel game-theoretic designs in emerging applications in sectors of crowdsourcing, cyber-physical systems, social networks, 5G cellular networks, and Internet of things networks.
- Impact of net neutrality and emerging economic constraints on network design.
- Optimizing network security via new game theoretic designs.
- Fundamental results on convergence and performance of game-theoretic mechanisms in realistic networking environments.
- Experimental results that demonstrate how game theory can be applied in practical testbeds and systems.

Submission Guideline – Authors should refer to the submission rules specified in the “Information for Authors” section of the JSAC guidelines (<http://www.comsoc.org/jsac/author-information>) to prepare their papers (submissions not satisfying the requirements will be immediately rejected without review). Papers should be submitted through EDAS (<http://www.edas.info>) according to the following schedule:

- Manuscript submission: April 15, 2016
- Reviews Complete: July 15, 2016
- Final material sent to IEEE: September 1, 2016
- Publication date: Fourth Quarter 2016

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