

Journal of Supercomputing:
Special Issue —

Game Theoretic Analysis for Large-Scale Networks and Traffic Data

Game theory has recently become a useful tool for modeling and studying various networks. The past decade has witnessed a huge explosion of interest in issues that intersect networks and game theory. However, there are still many interesting open research problems left to be identified/explored as well as many issues to be addressed. More recently, the size of data traffic has become increasingly large, so the demand for large-scale network analysis significantly increases, and game theory correspondingly requires more intelligent transformation. Take social network services for example, the number of users on Facebook[®] and Twitter respectively reaches 1.3 billion and 0.6 billion by the end of 2013 according to the survey at www.statisticbrain.com. In mobile communications, the report indicates the number of active cellular phones will reach 7.3 billion in 2014. Such a scale of network sizes is way beyond the capability of a single computer or even a workstation. Therefore, how to design algorithms for such a change is of priority concerns.

In response to the aforementioned topics, this special issue particularly focuses on research and analysis for large-scale networks and traffic data. This special issue encourages prospective authors to submit quality papers that advance the state-of-the-art and practical applications of game theory for networks. Research areas relevant to the special issue include, but are not limited to, the following items.

- Social network analysis
- Network optimization
- Network security based on game theory
- Information and communication models
- Network performance evaluation
- Traffic models and QoS requirements
- Reliability and quality assurance
- Game theory in wireless networks and communications
- Correlated equilibriums
- Rate allocation game
- Game theory-based reinforcement learning, Q-learning, and online learning
- Coalitional game theory in wireless networks
- Game theory applications in cognitive radio networks

- Ubiquitous network
- Hadoop applications for large-scale networks and traffic data
- Game theoretical analysis and applications for big data
- Multimedia communication

Submissions must not have been previously published, with the exception that substantial extensions of conference papers can be considered. The authors will be required to follow the Author's Guide for manuscript submission to the Journal of Super Computing at: <http://www.springer.com/computer/swe/journal/11227>. Full manuscripts should be submitted electronically through Manuscript Track System: <https://www.editorialmanager.com/supe/>.

Proposed Schedule:

Submission deadline:	February 15, 2015
Notification of acceptance:	March 15, 2015
Final manuscript due:	April 15, 2015
Tentative publication date:	June 01, 2015

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