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Special Issue on Signal Processing for Social Networks
of the
IEEE Journal of Selected Topics in Signal Processing

Networks are fundamental to our modern world: they appear throughout science and society, and continue to grow in size, complexity and importance. Whenever entities and relationships between them are observed, a network is defined. As structural objects composed of nodes and links, networks play a strong and well-defined role across mathematics, science and engineering.

However, significant advances in mathematical knowledge and understanding are required if a holistic set of theory and methods is to be developed for signal processing on graphs and networks—particularly social networks. In this realm, an important byproduct of the emergence of on-line social media is the phenomenon that most things that are done on-line are recorded instantly: be it web-clicks, transactions, wall-posts on Facebook, tweets, or blogs. In the past year alone, 1.8 zettabytes (10^{21}) of data have been generated in this way. The access to this massive amount of social data presents a unique opportunity to the signal processing community.

As networks grow in size and complexity, the ability to analyze them using modern signal processing methods is at substantial risk of failing to keep pace. This special issue, "Signal Processing for Social Networks," will focus on a core set of signal processing fundamentals for social networks, to provide both the necessary strong theoretical underpinnings and also the practical tools required to impact important practical applications.

Potential topics include, but are not limited to:

- Multi-agent estimation, detection and active decision-making in which agents communicate over (a possibly random) graph
- Handling, analysis, and visualization of "big data" from social networks
- Statistical signal processing and machine learning for social network data
- Detection and estimation theory with application to social networks
- Models and inference algorithms for information spreading in social networks
- Privacy and security & privacy preserving inference on user behavior from social network data
- Design, pricing and incentive mechanism for crowd-sourced system
- Data-driven policy making

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Schedule:
- Manuscript submission due: September 15, 2013
- First review due: December 1, 2013
- Revised manuscript due: January 15, 2014
- Second review due: March 1, 2014
- Final manuscript due: April 1, 2014

For Information on Paper Submission Please Visit the Following Site:

http://www.signalprocessingsociety.org/publications/periodicals/jstsp/jstsp-author-info/