

Call for Papers
IEEE Signal Processing Society
IEEE Journal of Selected Topics in Signal Processing

**Special Issue on Signal Processing in
Gossiping Algorithms Design and Applications**

Distributed consensus and gossiping algorithms have recently spurred a number of new research results on decentralized signal processing. In this context, network gossiping models can solve a variety of classical sensor array processing, fusing data collected at sensors that are not co-located to perform adaptive filtering, computing parameter estimates or decisions, without central coordination. Closely related to these studies is the research focused on optimizing objective functions in a decentralized setting. Given the importance gained by the network gossiping primitive, many new studies have analyzed the tradeoffs that exist between computation accuracy and communication cost, particularly in wireless media, and the impact of fading and mobility on the information diffusion speed. Gossiping has also been used as a tool to compress data as they are aggregated. This special issue intends to attract papers that advance fundamentally the application and understanding of the network gossiping primitive for decentralized signal processing over wireless sensor networks.

We invite original and unpublished research contributions in all areas relevant to decentralized signal processing through network gossiping. The topics of interest include, but are not limited to:

- Decentralized estimation and detection algorithms via network gossiping
- Gossip algorithms for sensor fusion and querying
- Compressive data aggregation via gossip algorithms
- Performance analysis of gossiping protocols and scaling laws
- Decentralized optimization via network gossiping
- Gossip algorithms for decentralized adaptive filtering
- Gossiping models for social networks analysis and social learning
- Gossip algorithms performance under communication constraints
- Coding and channel access methods for wireless network gossiping

Prospective authors should visit <http://www.signalprocessingsociety.org/publications/periodicals/jstsp/> for information on paper submission. Manuscripts should be submitted using the Manuscript Central system at <http://mc.manuscriptcentral.com/jstsp-ieee>. Manuscripts will be peer reviewed according to the standard IEEE process.

Manuscript submission due:	July 30, 2010
First review completed:	Oct 20, 2010
Revised manuscript due:	Nov 30, 2010
Second review completed:	Jan 30, 2011
Final manuscript due:	Feb 30, 2011

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