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Symposium on Distributed Optimization and Resource Management over Networks Call for Papers

General Co-Chairs:

Amir Asif, Concordia University

Zhi-Quan Luo, University of Minnesota

Technical Co-Chairs:

Necdet Serhat Aybat, Pennsylvania State University

Mingyi Hong, Iowa State University

Qing Ling, University of Science and Technology of China

With the rapid advances in sensing, communication, and storage technologies, distributed data acquisition is now ubiquitous in many areas of engineering, biological, and social sciences. For example, the large-scale implementation of advanced metering systems in the smart grids enables real time collection of a huge amount of distributed data (voltages, phases, etc), the understanding of which is critical in improving the overall performance of the future power systems. More examples of distributed data include high-resolution videos from a network of surveillance systems, interactions on a social network, and environmental data from sensor networks. Timely and effectively processing of such large amount of distributed, and possibly corrupted and/or online data requires not only novel data processing techniques, but also a deep understanding of the underlying network properties of physical systems, including the network topology, the processing capability of each distributed node, the nature of the data, etc. These sophisticated characteristics bring new challenges for the design and analysis of optimization and resource management algorithms. This symposium aims to bring together researchers and experts in the fields of signal processing, control, optimization, network sciences, and cyber-physical systems to address the emerging challenges related to this topic. Emphasis will be given to theories and applications for distributed signal processing systems, cyber-physical systems as well as advanced distributed control and optimization techniques. Topics of interest include but are not limited to:

- Signal Processing over networks and graphs
- Distributed optimization for signal processing
- Distributed optimization for cyber-physical systems
- Distributed resource management over networks
- Robust and stochastic optimization over networks
- Asynchronous coordination schemes
- Machine learning over networks and graphs
- Distributed optimization for communication systems
- Distributed control over networked systems
- Nonconvex optimization methods over networks
- Privacy preservation in distributed algorithms

Paper Submission: Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures and possible references, and with one additional optional 5th page containing only references) or extended abstracts (up to 2 pages), for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2017 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. Accepted full-length papers will be indexed on IEEE Xplore. Accepted abstracts will not be indexed in IEEE Xplore, however the abstracts and/or the presentations will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture and poster sessions.

Important Dates:

- ❖ **May 15, 2017:** Paper submission due
- ❖ **June 30, 2017:** Notification of Acceptance
- ❖ **July 22, 2017:** Camera-ready papers due

For inquiries and questions please contact the Symposium Chairs: Necdet Serhat Aybat (nsa10@engr.psu.edu), Mingyi Hong (mingyi@iastate.edu), Qing Ling (qingling@mail.ustc.edu.cn), Amir Asif (amir.asif@concordia.ca) or Zhi-Quan Luo (luozq@umn.edu).