



Call for Papers

The unprecedented advances in sensing, communication, and storage technologies have motivated the development of a plethora of optimization and learning algorithms capable of distributed operation over networks. Some of the popular application areas where such algorithms have been widely applied include distributed signal processing in wireless sensor networks, distributed resource allocation in cellular and ad hoc networks, distributed machine learning algorithms for Big Data, and distributed localization and tracking.

Desired attributes of such decentralized information processing algorithms include parallelizability, scalability, robustness to channel impairments and network delays, low-cost operation, and the ability to handle uncertain and dynamic network topologies. Embedding such features into classical information processing techniques is challenging, and has sparked the development of a gamut of distributed algorithms.

The aim of the workshop is to provide an international forum for discussions of recent developments in distributed learning, optimization, signal processing, and resource management. The focus will be on the design and analysis of algorithms capable of handling the vagaries of wireless networks, such as delays, limited and heterogeneous abilities, channel impairments, and communication restrictions arising due to the network topology.

Topics of interest include (but are not limited to):

1. Machine learning over networks
2. Signal processing over networks
3. Statistical signal processing on networks
4. Distributed optimization for signal processing
5. Distributed optimization for communication systems
6. Distributed optimization for cyber physical systems
7. Distributed control over networked systems
8. Distributed resource management over networks
9. Non-convex optimization methods over networks
10. Robust and stochastic optimization methods over networks
11. Privacy preservation in distributed algorithms
12. Asynchronous coordination schemes

We solicit regular papers that present novel and unpublished research results. Workshop papers should not exceed 6 pages in standard double column ACM conference format, including figures, tables, references, and appendix. As per ACM policy, papers submitted to other conferences or journals will not be considered for publication. Accepted papers will appear in the conference proceedings published by the ACM.

Important Dates:

- Submission deadline: **1 April 2018**
- Notifications: **2 May 2018**
- Camera-ready submission due: **10 May 2018**

Workshop co-chairs

Ketan Rajawat, IIT Kanpur, India

Pramod K. Varshney, Syracuse University, USA