GlobalSIP 2013

IEEE Global Conference on Signal and Information Processing

Optimization in Machine Learning and Signal Processing

www.ieeeglobalsip.org/sym/13/OMLSP

December 3-5, 2013 • Austin, Texas, U.S.A.

Organizing Committee

General Co-Chair
Pradeep Ravikumar
University of Texas at Austin

General Co-Chair
Sujay Sanghavi
University of Texas at Austin

Call for Papers

This workshop seeks to explore the fertile intersection of signal processing, machine learning and large-scale optimization. Many recent and fundamental advances in drawing inference from data have involved formulating statistical objectives - both inferring a model, and predicting thereof - as optimization problems.

A key factor complicating matters is that modern signal processing applications often demand solving such optimization problems at very large scales. It thus becomes important to leverage any structure present in the statistical estimation problem, both classical structures such as strict/strong convexity, and smoothness, but also other statistical-estimation-specific structures such as sparsity, graphical model structure, low-rank structure and so on.

What are the operational and fundamental relationships between computation and statistical efficiency? Which facets of optimization methods are inherently parallelizable (e.g. message-passing algorithms)? What are the limits and bottlenecks faced by the state of the art optimization methods when faced with large-scale problems? It is the aim of this workshop to answer questions in this vein by bringing together researchers from different communities — signal processing, machine learning, statistics and mathematical programming — and identify common intuitions underlying successful methods.

Topics of interest include:

- Models and estimation
- Sparsity, Low-rank and other methods in high-dimensional statistics
- Large-scale convex optimization: algorithms and applications
- Graphical models: inference, structure learning etc.
- Optimization for clustering, classification, regression etc.
- Non-convex and iterative methods

Paper Submission
Paper submission will be online only through the GlobalSIP 2013 website. Papers should be in IEEE two-column format and no longer than 4 pages.

Symposia Website
Full details, new updates, and submission instructions can be found on the symposia website, http://www.ieeeglobalsip.org/sym/13/OMLSP

Important Dates	
Paper Submission Deadline	June 15, 2013
Review Results Announce	July 30, 2013
Camera-Ready Papers Due	September 7, 2013

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