



**Climate Program Remote Sensing Workshop
February 12-14, 2018**

SPEAKER TITLES/ABSTRACTS

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“Optimization for Distributed Data Systems: An Overview and Some Theoretical Results”

The asynchronous parallel algorithms are developed to solve massive optimization problems in a distributed data system, which can be run in parallel on multiple nodes with little or no synchronization. Recently they have been successfully implemented to solve a range of difficult problems in practice. However, the existing theories are mostly based on fairly restrictive assumptions on the delays, and cannot explain the convergence and speedup properties of such algorithms. In this talk we will give an overview on distributed optimization, and discuss some new theoretical results on the convergence of asynchronous parallel stochastic gradient algorithm with unbounded delays. Simulated and real data will be used to demonstrate the practical implication of these theoretical results.