数学与系统科学研究院

计算数学所学术报告

报告人： **Qi Meng**

（ 北京大学数学科学学院 ）

报告题目：

Asynchronous Accelerated Stochastic Gradient Descent with Variance Reduction

邀请人： 刘歆 副研究员

报告时间：**2016 年 4 月 20 日（周三）**

下午 15:00-16:00

报告地点： 科技综合楼三层

305 会议室

Abstract：

Stochastic gradient descent (SGD) is a widely used optimization algorithm in machine learning. We proposed an algorithm called stochastic accelerated gradient descent (SASGD), which accelerated SGD by combining three techniques: variance reduction, Nesterov's acceleration method and coordinate descent. In order to improve the training speed or leverage larger-scale training data, we also studied asynchronous parallelization of SASGD and proposed asynchronous accelerated SGD (AASGD). Both theoretical and experimental results show that SASGD outperforms other stochastic gradient descent algorithms. Compared with SASGD, AASGD can achieve near linear speedup. Finally, I will briefly introduce our ongoing work on asynchronous parallelization of proximal SGD with variance reduction.

欢迎大家参加！