数学与系统科学研究院

计算数学所学术报告

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报告题目：

Stochastic Quasi-Newton Methods for Nonconvex Stochastic Optimization

邀请人： 袁亚湘 院士

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下午 16:30-17:30

报告地点： 科技综合楼三层

311 报告厅

Abstract:

In this talk, we discuss stochastic quasi-Newton methods for nonconvex stochastic optimization. We assume that only stochastic information of the gradients of the objective function is available via a stochastic first-order oracle (SFO). We firstly propose a general framework for stochastic quasi-Newton methods solving such kind of problems. This type of methods extend the classic quasi-Newton method for deterministic optimization problems to a stochastic setting with stochastic information of the function being used. Secondly, we propose a general framework for a class of randomized stochastic quasi-Newton methods in which the number of iterations conducted by the algorithm is a random variable. The worst-case SFO-calls complexities of these methods are analyzed. Thirdly, we propose a specific algorithm that fall into this framework: stochastic damped-BFGS method. Finally, we report some preliminary numerical results that demonstrate the efficiency of the proposed algorithms.

欢迎大家参加！