计算数学所学术报告

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报告题目：

Smooth quasi-Newton methods for nonsmooth optimization

邀请人：　袁亚湘院士

　　　　　优化与应用研究中心

报告时间：**2017 年 12 月 8 日（周五）**

上午 10:00-11:00

报告地点：　数学院科技综合楼

　　　　　三层 **311** 报告厅

报告摘要：

Sporadic informal observations over several decades (and most recently in Lewis-Overton, 2013) suggest that quasi-Newton methods for smooth optimization can also work surprisingly well on nonsmooth functions. This talk explores this phenomenon from several perspectives. First, we compare experimentally the two most popular quasi-Newton updates, BFGS and SR1, in the nonsmooth setting. Secondly, we study how repeated BFGS updating at a single fixed point can serve as a separation oracle (for the subdifferential). Lastly, we show how Powell's original 1976 BFGS convergence proof for smooth convex functions in fact extends to some nonsmooth settings.