

数学与系统科学研究院
计算数学所定期学术报告

报告人： 湛稳固 研究员

(北京应用物理与计算数学研究所)

报告题目：

**Recovery of signals with block
structure by weighted norm
minimization**

邀请人： 许志强 研究员

报告时间： 2017 年 6 月 22 日 (周四)

下午 16:00-17:00

报告地点： 数学院思源楼一层
报告厅

Abstract:

In this talk, we introduce a weighted ℓ_2/ℓ_1 minimization to recover block sparse signals with arbitrary prior support information. When partial prior support information is available, a sufficient condition based on the high order block RIP is derived to guarantee stable and robust recovery of block sparse signals via the weighted ℓ_2/ℓ_1 minimization. We then show if the accuracy of arbitrary prior block support estimate is at least 0.5, the sufficient recovery condition by the weighted ℓ_2/ℓ_1 minimization is weaker than that by the ℓ_2/ℓ_1 minimization, and the weighted ℓ_2/ℓ_1 minimization provides better upper bounds on the recovery error in terms of the measurement noise and the compressibility of the signal. Moreover, we illustrate the advantages of the weighted ℓ_2/ℓ_1 minimization approach in the recovery performance of block sparse signals under uniform and non-uniform prior information by extensive numerical experiments.

欢迎大家参加！