数学与系统科学研究院

计算数学所学术报告

报告人： 张娜 博士

（ 华南农业大学数学系 ）

报告题目：

Simple, convergent and efficient proximity algorithms for multi-block convex optimization problem

邀请人： 许志强 研究员

报告时间：2015 年 12 月 9 日（周三）

上午 8:30~9:30

报告地点： 科技综合楼三层

301 小报告厅

Abstract：

We introduce a class of fixed-point proximity algorithms for solving optimization problems in the context of image processing. We first characterize solutions of the optimization problem in terms of the proximity operators. Then a class of iterative schemes are developed based on the fixed-point equations that characterize the solutions. For the purpose of studying convergence of the proposed algorithms, we introduce a notion of weakly firmly non-expansive mappings and establish under certain conditions that the sequence generated from a weakly firmly non-expansive mapping is convergent. We use this general convergence result to conclude that the proposed multi-step algorithms converge. Many specific algorithms can be developed from our approach. Recently, we also design a convergent ADMM-type algorithm for multi-block optimization problems. The numerical results show the efficiency of our approach.

欢迎大家参加！