

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Deren Han**

(*School of Mathematical Sciences, Nanjing Normal University*)

报告题目:

**A customized Douglas-Rachford
splitting algorithm and its
application in Dantzig Selector**

邀请人: **戴彧虹 研究员**

报告时间: **2014 年 1 月 21 日 (周二)**

上午 9:15~10:15

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

We consider applying the Douglas-Rachford splitting method (DRSM) to the convex minimization problem with linear constraints and a separable objective function. The dual application of DRSM has been well studied in the literature, resulting in the well known alternating direction method of multipliers (ADMM). In this paper, we show that the primal application of DRSM in combination with an appropriate decomposition can yield an efficient structure-exploiting algorithm for the model under consideration, whose subproblems could be easier than those of ADMM. Both the exact and inexact versions of this customized DRSM are studied; and their numerical efficiency is demonstrated by some preliminary numerical results. We apply the algorithm to Dantzig Selector and compare it with some other splitting-type methods. Finally, some extensions are discussed.

欢迎大家参加!