

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**

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报告题目:

**An augmented-Lagrangian-based
parallel splitting method for
separable convex programming with
applications to image**

邀请人: **戴彧虹研究员**

报告时间: **2011年9月8日(周四)**

上午9:30-10:30

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

This talk considers the linearly constrained convex programming problem whose objective function is separable into finitely many individual functions without crossed variables. Without any consideration of the separable structure, the classical augmented Lagrangian method (ALM) is directly applicable. The purpose of this paper is to develop algorithms that can exploit the separable structure to full extent. More specifically, we present a parallel splitting method by decomposing the subproblem generated by ALM at each iteration into some smaller and easier subproblems in accordance with the separable structure. With this decomposition, properties of the function components can be exploited individually and separably. The new method differs from some existing alternating splitting methods in that the decomposed subproblems at each iteration can be solved in parallel. We mainly show the wide applicability and encouraging efficiency of the new method in the area of image processing. Numerical comparisons with some existing splitting type methods are also reported.

欢迎大家参加!