

数学与系统科学研究院

计算数学所学术报告

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报告题目:

Some acceleration techniques for preconditioned Douglas-Rachford splitting algorithm with applications for mathematical imaging

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报告时间: 2018 年 12 月 13 日 (周四)

上午 10:00-11:00

报告地点: 科技综合楼三层

311 报告厅

Abstract:

The Douglas-Rachford splitting method essentially belongs to "implicit" splitting methods with freely chosen step size with the price for solving linear or nonlinear equations. In this talk, we will discuss the some acceleration techniques for preconditioned Douglas-Rachford splitting method. We will introduce the inertial and overrelaxation variants of preconditioned Douglas-Rachford splitting method, and the accelerated preconditioned Douglas-Rachford splitting method with $O(1/k^2)$ convergence rate with specially designed step sizes. All variants of preconditioned Douglas-Rachford splitting method are aimed at the nonlinear saddle-point problem without any constraint on the step size. The talk is based on joint works with Prof. Kristian Bredies, University of Graz, Austria.

欢迎大家参加！