数学与系统科学研究院

计算数学所博士后定期学术报告

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报告题目：

An Extrapolated Alternating Projection Algorithm for Computing Block Sparse Generalized Inverse Matrices

报告时间：2022 年 10 月 12 日（周三）

下午 16:00-17:00

报告地点：科技综合楼

301 教室

Abstract：

In this talk, we aim to compute the generalized inverse of a block sparse matrix that preserves the same sparsity structure, which can be reformulated as a convex feasible problem to seek an intersection of a subspace and an affine space. The classical alternating projection algorithm is tailored for this problem with a linear convergence guarantee. However, the convergence rate is quite slow when the angle between two spaces is relatively small, which is often the case in practice. To address this issue, we introduce an extrapolation step to accelerate the convergence rate. The corresponding stepsize is adaptively computed by minimizing the constraint violation. Comprehensive numerical experiments demonstrate that the proposed algorithm not only achieves a faster convergence rate but also reduces computational costs.

欢迎大家参加！