数学与系统科学研究院

计算数学所网络学术报告

报告人：　**Dr. Bin Gao**

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报告题目：

A Riemannian rank-adaptive method for low-rank matrix completion

邀请人：　周爱辉 研究员

报告时间：2022 年 2 月 24 日（周四）

下午 **14:30-15:30**

报告工具：

腾讯会议（**ID: 817 977 686**）

Abstract：

In this talk, we consider the low-rank matrix completion problem which has been extensively studied in recent years. This problem can be solved by Riemannian optimization on a fixed-rank manifold. However, a drawback of the known approaches is that the rank parameter has to be fixed a priori. Instead, we consider the optimization problem on the set of bounded-rank matrices. We propose a Riemannian rank-adaptive method, which consists of fixed-rank optimization, rank increase step and rank reduction step. We explore its performance applied to the low-rank matrix completion problem. Numerical experiments on synthetic and real-world datasets illustrate that the proposed rank-adaptive method compares favorably with state-of-the-art algorithms.

This is a joint work with P.-A. Absil.

欢迎大家参加！