


复旦大学数学科学学院
数学综合报告会

报告题目：Joint Fudan - RICAM Seminar on Inverse Problems - Solving systems of quadratic equations: Algorithms and global geometry

报告人：Ke Wei（Fudan University）

时间：2020-10-14 星期三 19:00-20:00

地点：

https://www.ricam.oeaw.ac.at/events/seminars/fudan-ricam/

报告摘要：A Riemannian gradient descent algorithm and a truncated variant will be presented for solving systems of phaseless equations $|Ax|^2 = y$. The algorithms are developed by exploiting the inherent low rank structure of the problem based on the embedded manifold of rank-1 positive semidefinite matrices. Theoretical recovery guarantee has been established for the truncated variant, showing that the algorithm is able to achieve successful recovery when the number of equations is proportional to the number of unknowns. In addition, we will present a loss function without spurious local minima when the sampling complexity is optimal.

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