

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:

**Fast rank-one alternating
minimization algorithm for phase
retrieval**

邀请人: 许志强 研究员

报告时间: 2018 年 6 月 21 日 (周四)

上午 10:00-11:00

报告地点: 数学院南楼七层

702 教室

Abstract:

The phase retrieval problem is a fundamental problem in many fields, which is appealing for investigation. Existing algorithms usually use a least squares fitting to the measurements, yielding a quartic polynomial minimization. In this paper, we employ a new strategy by splitting the variables, and we solve a bi-variate optimization problem that is quadratic in each of the variables. An alternating gradient descent algorithm is proposed, and its convergence for any initialization is provided. Since a larger step size is allowed due to the smaller Hessian, the alternating gradient descent algorithm converges faster than the gradient descent algorithm (known as the Wirtinger flow algorithm).

Joint work with Jian-Feng Cai and Yang Wang

欢迎大家参加！