

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Tomohiro Sogabe**

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报告题目:

**Krylov subspace methods for
complex symmetric linear systems**

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报告时间: **2018 年 11 月 6 日 (周二)**

下午 15:30-16:30

报告地点: **科技综合楼三层**

311 报告厅

Abstract:

Complex symmetric (not Hermitian) linear systems arise in a rich variety of applications such as condensed matter physics, electromagnetics, and acoustics. One of the best-known Krylov subspace methods is the COCG (conjugate orthogonal conjugate gradient) method of van der Vorst and Melissen in 1990. In 2003, we proposed the Bi-CR (bi-conjugate residual) method for nonsymmetric linear systems at ICNLAO2003 conference organized by Professor Ya-xiang Yuan, and its specialized variant is the COCR method for complex symmetric linear systems, which tends to give smoother convergence behavior than the COCG method. In this talk, we give a brief overview of Krylov subspace methods for complex symmetric linear systems, and a recent progress of the COCG method in a direction of (generalized) shifted linear systems with multiple right-hand sides that also arise in condensed matter physics.

欢迎大家参加！