

数学与系统科学研究院  
计算数学所网络学术报告

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报告题目：

**The Cauchy two-matrix model,  
C-Toda lattice and CKP hierarchy**

邀请人： 常向科 副研究员

报告时间：2020 年 10 月 17 日(周六)  
下午 15:30-16:30

报告工具：腾讯会议 (ID: 343 470 820)

## **Abstract:**

**In my talk, I will first give a brief review on some known results of the Cauchy bi-orthogonal polynomials. Starting from the symmetric reduction of Cauchy biorthogonal polynomials, we derive the Toda equation of CKP type (or the C-Toda lattice) as well as its Lax pair by introducing time flows. Then, matrix integral solutions to the C-Toda lattice are extended to give solutions to the CKP hierarchy which reveals the time-dependent partition function of the Cauchy two-matrix model is nothing but the Tau-function of the CKP hierarchy. At last, the connection between the Cauchy two-matrix model and Bures ensemble is established from the point of view of integrable systems.**

**欢迎大家参加！**