

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Xiangke Chang**

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报告题目:

**About several classes of  
bi-orthogonal polynomials and  
discrete integrable systems**

邀请人: 胡星标 研究员

报告时间: 2016年2月19日(周五)

晚上 20:00~21:00

报告地点: 数学院南楼七层

702 会议室

## **Abstract:**

By introducing some special bi-orthogonal polynomials, we derive the so-called discrete hungry quotient-difference (dhQD) algorithm and a system related to the QD-type discrete hungry Lotka-Volterra (QD-type dhLV) system, together with their Lax pairs. These two known equations can be regarded as extensions of the QD algorithm. When this idea is applied to a higher analogue of the discrete-time Toda (HADT) equation and the quotient-quotient-difference (QQD) scheme proposed by Spicer, Nijhoff and van der Kamp, two extended systems are constructed. We call these systems the hungry forms of the higher analogue discrete-time Toda (hHADT) equation and the quotient-quotient-difference (hQQD) scheme, respectively. In addition, the corresponding Lax pairs are provided.

**欢迎大家参加！**