



# 北京理工大学

## 数学与统计学院学术报告

### Quantum wreath products

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**邀请人:** 万金奎

**时间:** 2024年03月18日 16:30-17:30

**地点:** 中关村校区研究生楼206

**摘要:** In this talk we introduce a new notion called the quantum wreath product, which is the algebra produced from a given algebra  $B$ , a positive integer  $d$ , and a choice of certain coefficients in  $B$  tensor  $B$ . Important examples that arise from our construction include variants of the Hecke algebras, such as (1) Ariki-Koike algebras, (2) affine Hecke algebras and their degenerate version, (3) Wan-Wang's wreath Hecke algebras, (4) Rosso-Savage's (affine) Frobenius Hecke algebras, (5) Kleshchev-Muth's affinization algebras, and (6) Hu algebra, which quantizes the wreath product  $S_m \wr S_2$  between the symmetric groups. Our uniform approach to their structure/representation theory encompasses many known results which were proved in a case by case manner. Our theory is motivated by (and has application to) the Ginzburg-Guay-Opdam-Rouquier conjecture on quasi-hereditary covers of Hecke algebras for complex reflection groups. This is a joint work with Dan Nakano and Ziqing Xiang.

**个人简介:** 赖俊儒, 台湾中研院数学所助理教授, 2016年博士毕业于美国弗吉尼亚大学, 曾在美国佐治亚大学, 德国波恩马克斯-普朗克研究所任职, 主要从事表示论与李理论的研究, 包括仿射赫克代数, 量子群, 量子对称对, 箭图簇等的结构和表示理论, 在国际知名期刊发表十余篇学术论文。