



華東師範大學 | 数学科学学院
School of Mathematical Sciences, East China Normal University

2024 年 ECNU 代数几何研讨会 (10.18) 程序册

华东师范大学闵行校区, 上海

2024.10.17-2024.10.18

会议报告人 (按姓氏拼音排序)

陈国度 (上海交通大学)

胡飞 (南京大学)

组织委员会 (按姓氏拼音排序)

杜荣 吕鑫 陆俊 孟晟 戚鲁 谈胜利 张通

日程安排

10 月 18 日

地址:华东师范大学 (闵行) 数学科学学院数学楼 102

时间	会议内容	主持人
上午	自由讨论	
14: 00-15: 00	陈国度: Minimal model program for \mathbb{Q} -factorial foliated dlt algebraically integrable foliations	吕鑫
15: 00-15: 30	中场休息	
15: 30-16: 30	胡飞: An upper bound for polynomial volume growth or Gelfand–Kirillov dimension of automorphisms of zero entropy	吕鑫
17: 30-19:00	晚宴	

报告摘要

Minimal model program

for \mathbb{Q} -factorial foliated dlt algebraically integrable foliations

陈国度

上海交通大学

Abstract: Minimal model program for foliations is an analogue of the classical minimal model program. Foliated dlt foliations play the same role as dlt pairs in the classical minimal model program, making it a natural class of singularities to study in the theory of foliations. In this talk, we show that we can run an MMP on a \mathbb{Q} -factorial foliated dlt algebraically integrable foliation. Numerous applications also will be presented. Joint work with Jingjun Han, Jihao Liu, and Lingyao Xie.

Bogomolov type inequality on fibred threefolds

胡飞

南京大学

Abstract: Let X be a smooth complex projective variety of dimension d and f an automorphism of X . Suppose that the pullback f^* of f on the real Néron–Severi space $N^1(X)_{\mathbb{R}}$ is unipotent and denote the index of the eigenvalue 1 by $k+1$.

We prove an upper bound for the polynomial volume growth $\text{plov}(f)$ of f , or equivalently, for the Gelfand–Kirillov dimension of the twisted homogeneous coordinate ring associated with (X, f) , as follows:

$$\text{plov}(f) \leq (k/2 + 1)d.$$

Combining with the inequality $k \leq 2(d-1)$ due to Dinh–Lin–Oguiso–Zhang, we obtain an optimal inequality that

$$\text{plov}(f) \leq d^2,$$

which affirmatively answers questions of Cantat–Paris–Romaskевич and Lin–Oguiso–Zhang.

This is joint work with Chen Jiang.