东南代数几何会议

Time: April 7-9, 2023.

Organizers: Li Zhan

Hosted by Department of Mathematics at SUSTech.

Venue: 205 at the third teaching building. (第三教学楼 205 室)

Conference Agenda

Time	Apr. 7, Friday	Time	Apr. 8, Saturday	Apr. 9, Sunday
		08:30–9:30	Non−vanishing &abundance(I)	Non−vanishing &abundance(IV)
		9:45–10:45	Non−vanishing &abundance(II)	Zheng Xu
		11:00–12:00	Yi Gu	Haidong Liu
16:00–17:00	Xingying Li	14:00–15:00	Non−vanishing &abundance(III)	
17:10–18:10	Tongji Gao	15:15–16:15	Mingshuo Zhou	
19:00–20:00	Yiming Zhu	16:30–17:30	Cheng Gong	
			Banquet	

I. Title and Abstract.

Apr. 7, Friday

Title: Albanese maps
Speaker: Xingying Li

Title: Singularities in positive characteristic
Speaker: Tongji Gao

Title: Positivity in positive characteristic
Speaker: Yiming Zhu

The series of lectures on "non-vanishing and abundance" will given by Lei Zhang and Zheng Xu.

Apr. 8, Saturday

Title: A survey on quasi-elliptic surfaces
Speaker: Yi Gu
Abstract: In this talk, we will give a brief overview of the theory of quasi-elliptic surfaces. We will discuss the canonical bundle formula, classification of singular fibres, Weierstrass model, Tate type algorithm and Mordell-Weil group for quasi-elliptic surfaces. Finally, we will also mention some recent progresses and open problems in this area.

Title: Verlinde formula in positive characteristic
Speaker: Mingshuo Zhou
Abstract: We firstly recall a finite dimensional proof (using moduli space of parabolic bundles over a curve) for Verlinde formula over , and then, introduce some progress in its positive characteristic case. This talk is based on some recent works with Professor Xiaotao Sun.

Title: The fibrations of surface over rational curves
Speaker: Cheng Gong
Abstract: Fibrations are important tools to classify algebraic surfaces and to study moduli spaces.Fibrations over rational curves play an important role. Many fibrations with remarkable arithmetic and geometric properties can be obtained from fibrations over rational curves by base changes.My lecture include two parts： (1)Classify fibrations of algebraic surfaces over rational curves, and give its applications.(2) Give some bounds of Mordell-Weil ranks of fibrations, and answer one of Prof. Mok's question.

Apr. 9, Sunday

Title: On the 3-dimensional lc abundance in positive characteristic
Speaker: Zheng Xu
Abstract: Over the last decade, the Minimal Model Program (MMP) for threefolds over a field of characteristic>3 has been largely established. A central problem remained is the log abundance conjecture. There are many results on the log abundance for klt threefold pairs in characteristic>5. In this talk, we explain how to generalize these results to lc threefold pairs in characteristic>3. For example, we prove that over an algebraically closed field of characteristic>3, the log abundance for klt threefold pairs implies the log abundance for lc threefold pairs.

Title: On Campana-Peternell's conjecture in dimension 4
Speaker: Haidong Liu
Abstract: Campana-Peternell's conjecture predicts that if the anti-canonical divisor of a projective manifold is strictly nef, then it is ample, that is, the manifold is Fano. In this talk, I will discuss some recent progress on this conjecture in dimension 4.

II. The Address of the Conference.

南方科技大学第三教学楼 205 室.
从 1 号门，也即图中正门进入。沿图中红线步行 300 米，即可到达第三教学楼 2 楼。

III. Accommodation information.

南方科技大学专家公寓:
地址: 深圳市南山区学苑大道 1088 号南方科技大学校内
入住方式: 报自己姓名，说南科大数学系李彤彤预订的即可. **如果您入住当天到达时间在晚上十一点半之后 (请提前一天联系李彤彤:13687627423)，房卡会放在前台键盘下，可自取**
专家公寓联系电话: (0755)86664284
会议负责人联系电话: 李展:18811757561 李彤彤:13687627423 李星颖:18373240623
注 1: 进入校园后在一号门处可乘坐校内巴士 1 号线到达专家公寓，或在校园三号门处直行 100 米即可到达专家公寓，详情可参见地图.
注 2: 会议开始前几天我们会给您发送入校许可，凭入校许可在 4.7-4.10 期间可以多次进出校园.

附近公共交通:
地铁 5 号线塘朗站
公交：M369，43，74，81 路，塘朗小学（或中科院研究院）站

IV. Transportation.

当您到达宝安国际机场或深圳各大火车站、汽车站后，都能通过机场大巴、地铁、公交车、出租车等交通工具前往南方科技大学. 推荐乘坐深圳地铁,5 号线的塘朗站位于南科大一号门附近. 此外，您也可以乘坐出租车来校, 目前南方科技大学有四道校园门（一号门、三号门、六号门、七号门）通车.

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深圳北站:
从深圳北站乘坐地铁与公交来校都十分方便，可乘坐地铁 5 号线从深圳北站到塘朗站（深圳北站-长岭陂站-塘朗站），并从 C 出口出站，然后步行 700 米左右到达学校一号门.
宝安国际机场:
乘坐地铁 11 号线到前海湾站，然后换乘地铁 5 号线到塘朗站并从 C 出口出站，步行 700 米左右到达学校 1 号门.

V. Map.