应用数学讲座

Научный Семинар по Прикладной Математике

Research Seminar on Applied Mathematics

应用数学报告（32）

报告人 / Докладчик / Speaker: 路志鹏 高级讲师

题目 / Название / Title: Incidence geometry with applications

时间 / Время / Time：05 Mar. 2022, 10:30-11:30

地点 / Место / Venue: 主楼 336

摘要 / Аннотация / Abstract:

Incidence geometry is currently a cutting edge subject in combinatorics. It arose from a classical question of Sylvester, and matured through the indigeneous work by Erdos, Gallai, de Bruijin, Szmeredi, Trotter, Sharir and so on. Particularly, the modern era progress by Guth-Katz on Erdos distinct distances problem in the plane augmented the theoretical significance of the subject with decisive input of topology and geometry, which is rare in combinatorics. I wish to convey gists of some research topics in this context, including the Erdos distinct distances problem and the unit distance problem in the plane, their analog in hyperbolic metric and the inner product problem. Focus will be on preliminary introduction to known results but bookkeeping proof details will be saved. Time permitting, I will try to advertise some of my own work in progress for seeking echoes.

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路志鹏博士现任深圳北理莫斯科大学工程系高级讲师。2018 年 9 月至 2021 年 8 月于德国哥廷根大学数学系从事博士后工作。2018 年 7 月毕业于美国印第安纳大学布鲁明顿分校，获数学博士学位。研究领域主要为计算代数几何、表示论、组合群论与离散几何等。主要研究成果发表在 International Mathematics Research Notices 等学术期刊。