

北京理工大学

## **2023 TALKS IN COMBINATORICS**



高奕博,北京国际数学研究中心助理教授,本科与博士毕业于麻省理工学院,导师为 Alex Postnikov 教授,研究领域为代数组合,主要研究方向包含 Schubert 计数演算和 Coxeter 群。

## An introduction to algebraic combinatorics

Algebraic combinatorics is the research area that connects algebra to combinatorics. In this talk, we will provide a very gentle introduction to this area. In the first half, we give an example of studying algebraic structures using combinatorics. Specifically, Schubert polynomials, which are the polynomial representatives of the Schubert classes that form a basis of the cohomology ring of the flag variety, enjoys rich combinatorial properties. In the second half of the talk, we give an example of using algebra to solve combinatorial questions. Namely, we establish the Sperner property of the weak Bruhat order via sl2 representations.

Nov 13 (Mon) 2023, 15.40–16.40 @Wencui E 609

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