

Frankfurter Seminar

Kolloquium des Instituts für Mathematik

Sommersemester 2024

Frankfurter Seminar, 15. Mai 2024

Lisa Sauermann (Rheinische Friedrich-Wilhelms-Universität Bonn)

*On three-term progression-free sets and related questions
in additive combinatorics*

Given some large positive integer N , what is the largest possible size of a subset of $\{1, \dots, N\}$ which does not contain a three-term arithmetic progression (i.e. without three distinct elements x, y, z satisfying $x+z=2y$)? Similarly, given a prime p and a large positive integer n , what is the largest possible size of a subset of the vector space F_p^n which does not contain a three-term arithmetic progression (i.e. without three distinct vectors x, y, z satisfying $x+z=2y$)? These are long-standing problems in additive combinatorics.

This talk will explain the known bounds for these problems, give an overview of some of the proof techniques, and discuss additional applications of these techniques to other additive combinatorics problems.

Tee ab 16:15 Uhr

Robert-Mayer-Straße 10 | Raum 711

Ginkgo-Seminar 15:15 - 16:00 Uhr

Aenne Benjes Three-term arithmetic progressions and the slice
rank method

Teilnahme nur für Studierende, Promovierende und Postdocs

Tee 16:15 - 16:45 Uhr

