
OLEKSIY KLURMAN, Royal Institute of Technology (KTH)

The Erdos discrepancy problem over the function fields

The famous Erdos discrepancy problem (now theorem of Tao) asserts that for any sequence $\{a_n\}_{n \geq 1} = \{\pm 1\}^{\mathbb{N}}$,

$$\sup_{n,d} \left| \sum_{k=1}^n a_{kd} \right| = \infty.$$

It was observed during the Polymath5 project, that the analog of this statement over the polynomial ring $\mathbb{F}_q[x]$ is false. In this talk, we discuss "corrected" form of EDP over $\mathbb{F}_q[x]$ explaining some features that are not present in the number field setting. The talk is based on a joint work with A. Mangerel (CRM) and J. Teravainen (Oxford).