Algebra, Combinatorics and Number Theory Seminar

Date. Wednesday, March 20, 2024 - 4pm Porto (FC1 007) [1]

Speaker. Alexander Guterman - Bar-Ilan University, Israel

Title. Estimating length of non-associative algebras

Abstract.

The length of a finite system of generators for a finite-dimensional algebra over a field is the least positive integer k such that the products of length not exceeding k span this algebra as a vector space.

The maximum length for the systems of generators of an algebra is called the length of this algebra.

Length function is an important invariant widely used to study finite dimensional algebras since 1959.

The length evaluation is a difficult problem. For example, the length of the full matrix algebra is still unknown.

In the talk we will discuss the length function for associative and non-associative algebras. We will demonstrate that the investigation of the length function requires a number of tools from algebra and combinatorics.

The talk is based on the series of joint works with Dmitry Kudryavtsev, Olga Markova and Svetlana Zhilina.

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[1] https://videoconf-colibri.zoom.us/j/7820604023

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