

SEMINÁRIO DE ÁLGEBRA

The GK dimension of a weighted Leavitt path algebra

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18/05/18

14:30 Horas

Auditório do MAT

Abstract. Let K be a field and A a K -algebra which is generated by a finite-dimensional subspace V . The *Gelfand-Kirillov dimension* or *GK dimension* of A is defined as

$$\text{GKdim } A = \limsup_{n \rightarrow \infty} \log_n \dim_K V^n$$

where V^n denotes the span of all products $v_1 \dots v_k$, $v_i \in V$, $k \leq n$. In a recent paper the GK dimension of a weighted Leavitt path algebra of a finite weighted graph was obtained. I will talk about this result, which generalises a result of A. Alahmadi, H. Alsulami, S. Jain and E. Zelmanov on the GK dimension of Leavitt path algebras of finite graphs.

References

- [1] A. Alahmadi, H. Alsulami, S. Jain, E. Zelmanov, *Leavitt path algebras of finite Gelfand-Kirillov dimension*, J. Algebra Appl. **11** (2012), no. 6, 1250225.
- [2] R. Preusser, *Weighted Leavitt path algebras of finite Gelfand-Kirillov dimension*, arXiv:1804.09287 [math.RA].