

# SEMINÁRIO DE ÁLGEBRA

## On graphs encoding the generating properties of a finite group

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**Abstract.** The generating graph  $\Gamma(G)$  of a finite group  $G$  is the graph defined on the non-identity elements of  $G$  in such a way that two distinct vertices are connected by an edge if and only if they generate  $G$ . The graph  $\Gamma(G)$  gives interesting information only if  $G$  is 2-generated.

We introduce an alternative definition that works in a more general setting and encodes the generating properties of a  $d$ -generated finite group, for any positive integer  $d$ . In the talk we will present some results and questions related to the study of these graphs. This is a joint work with Andrea Lucchini.